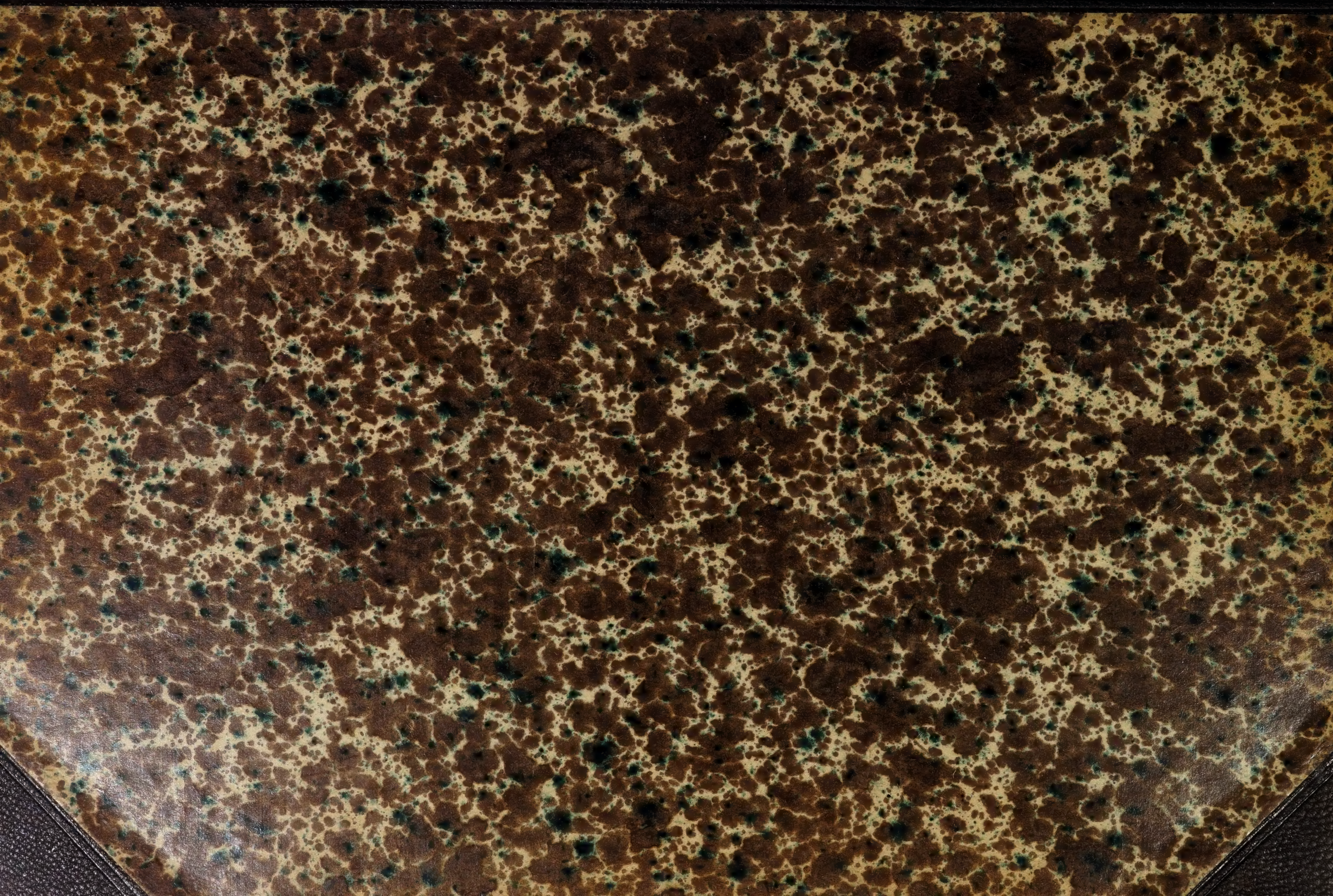

ARTICLE VI.—The Secretary shall have authority to loan to members and to holders of second class stock, any work belonging to the SECOND CLASS, subject to the following regulations.

Section 1.—No individual shall be permitted to have more than *two books* out at one time, without a written permission, signed by at least two members of the Library Committee, nor shall a book be kept out more than TWO WEEKS; but if no one has applied for it, the former borrower may renew the loan. Should any person have applied for it, the latter shall have the preference.

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ARTICLE VIII.—No member or holder of second class stock, whose annual contribution for the current year shall be unpaid or who is in arrears for fines, shall be entitled to the privileges of the Library or Reading Room.

ARTICLE IX.—If any member or holder of second class stock, shall refuse or neglect to comply with the foregoing rules, it shall be the duty of the Secretary to report him to the Committee on the Library.

ARTICLE X.—Any member or holder of second class stock, detected in mutilating the newspapers, pamphlets or books belonging to the Institute shall be deprived of his right of membership, and the name of the offender shall be made public.

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EACH • NUMBER • CONTAINS • VARIOUS

THE JOURNAL OF ORIGINAL DESIGNS FABRICS AND TEXTILE INDUSTRIES.

DEVOTED TO THE INTERESTS OF SPINNERS, MANUFACTURERS, BLEACHERS, DYERS, PRINTERS, AND FINISHERS OF ALL CLASSES OF TEXTILE GOODS.

EDITED BY

H. & R. T. LORD,

3, GERRARD STREET,

HALIFAX.

CARPETS, DAMASKS, TABLE-COVERS, TAPESTRIES, SILKS, CALICO-PRINTS, QUILTS, STUFFS, LINENS, LACES, VELVETS, COATINGS, FANCY CLOTHS; RAW MATERIALS; MACHINERY, TOOLS.

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Contents.

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Protection and Retaliation.

TOWARDS the latter part of last month the Duke of Rutland, speaking before the House of Lords on the gloomy outlook in agricultural matters, referred to the protectionist tariffs in foreign countries. The *Spectator*, in an article on the Duke's speech, says:—The figures which the Duke of Rutland laid before the House of Lords were gloomy enough to justify all that he said about the gravity of the agricultural depression. One is tempted, sometimes, when the remedies suggested are very impracticable, or very inappropriate, to put the question aside as one that it is useless to talk about. But the loss and the suffering are there, though they may not yet have brought with them the wisdom which can turn them to account. When the Duke of Rutland said that in the last ten years a million acres of land have gone out of cultivation, he possibly means, as regards some of it, that corn growing has been abandoned, and some less profitable form of cultivation substituted. In that case there must be something to be set against the eight millions at which the Duke estimates the dead loss. There is no doubt, however, that on a large amount of land which was once under profitable cultivation, nothing, or nothing that pays the farmer, is any longer grown, and, of course, the consequent injury to the country is very great. In part, no doubt, this state of things is due to bad seasons. The wonder which has been excited in us by the fine weather that has now lasted a month is a significant testimony to our recollections of recent summers. But though the farmer would have been very much better if he had been living in a different cycle, he would not have been prosperous. The principle of Free Trade is that each country shall grow the crops for which it is best suited, and on this principle England is not a wheat-growing country. We can bring grain from abroad more cheaply than we can grow it here, and when the movement of trade is unfettered, this fact becomes quickly known, and is not again lost sight of. As yet, however, English agriculturists have not thoroughly mastered this truth. They have proved, to their cost, that England is not fitted for wheat growing, but they have not yet found out what it is fitted for. By and by, no doubt, this discovery will be made; crops which the English climate will allow to ripen in security, or which cannot be brought from a distance without injury, will take the place of those golden harvests which were once our pride, and in the dairy or the market garden the farmer will seek, if not find, compensation for his lost wheat sheaves. It is because this revolution in the agricultural imagination is so indispensable, and yet so hard to bring about, that we regret that such advisers as the Duke of Rutland should still have the farmer's ear. So long as any dreams of protective duties still have possession of him, he will close his eyes to the cold daylight of actual fact. The margin between profit and loss seems so small, the discrepancy between them might so easily be bridged over by a moderate duty on foreign corn, that it is not surprising that he should find it hard to believe that the thing is impossible. When legislators and great landowners refuse to be convinced in their own persons, how can the farmer be expected to be in advance of them?

"The Duke of Rutland appeals, for the confirmation of his theory, that a return to Protection is the proper and only effectual remedy for the present distress, to certain facts which are really destructive of it. He says, very truly, that trade is bad, and he rightly attributes its badness to the protective policy of other countries, and notably of the United States. But then, by a curious perversion he finds the seat of the mischief not in the adoption of this policy by foreign nations, but in its rejection by our own. If Englishmen were as wise as Americans or Frenchmen, or even as their own Colonists, duties on one side would be balanced by duties on the other; and though our goods might be kept at bay by our neighbours, we should still be happy in the consciousness that we were equally dour against their goods. The Duke of Rutland quoted a letter from a Sheffield manufacturer, in which there occurs this extraordinary passage: "The want of reciprocity necessitates the manufacturers here reducing the wages of the workman to a shockingly low scale, to enable them to climb the barrier of protection . . . . . and in consequence of our suicidal policy we shall find ourselves supporting a large portion of our able-bodied workmen out of the poor-rate." If the words "suicidal policy" were omitted from this statement, it would be true, though even then it would be exaggerated. Want of reciprocity, in the sense that France and the United States are not Free-traders, does keep down wages in England. It is plain, however, from the insertion of these words, that what the writer means by want of reciprocity is not that other countries are not Free-traders, but that England is not Protectionist. With the imposition of retaliatory duties all would go well. But the only effect of this policy would be to lower wages still further. The sum actually paid would remain the same, but it would not go nearly so far. The sums actually paid would remain the same, because the imposition of duties would not enlarge the market for English-manufactured goods. English iron and English woollens do not stand on the same footing as English wheat. If there were a duty on similar goods imported from abroad it would not increase the home demand. The foreign manufacturers do not, to any appreciable extent, undersell us in our own markets; they only succeed, by the help of protective

duties, in keeping us out of their markets. No doubt there are industries in which the foreigner can undersell the Englishman, even in England; but this does not apply to the great trades which the Sheffield manufacturer has in his mind. In them the market can only be appreciably enlarged by the removal of the barriers which keep English goods out of foreign countries. But though the wages stated in money would remain the same, the wages stated in value would be less. The workman has managed to live through this last bad time by the cheapness of food, and the cheapness of food would be at an end as soon as the principle of reciprocity had been admitted. If we once take to the levying of duties for purposes not purely fiscal we cannot stop short of a duty on corn. Agriculture is the industry that most suffers from foreign competition; consequently, agriculture has the best claim to be protected against such competition. There is one thing which the Americans must either send to us or keep it at home unsold. No fall in prices would induce people to eat more bread than they want, and it is from the surplus over and above what they want that the corn with which America supplies us is drawn. The United States would keenly feel a duty on corn imported into England; but in proportion as they suffered from the cessation of the demand, the English workman would suffer from the diminution of the supply.

Here comes in Lord Salisbury's way of looking at the question. "You have admitted," he might say, "that the Americans would keenly feel the imposition of a duty on corn imported into England, and this is all I want to prove my point that retaliatory duties would very soon bring the Protectionist Powers to their senses." But at whose cost? At the cost of the unhappy English industries which had first been galvanized into unnatural life by the incidental protection of a retaliatory duty. The silk manufacture, for example, which is now almost killed by French competition, by the application of reciprocity would come to life again. French silks would naturally be chosen for the imposition of retaliatory duties, in order that the silk manufacturers of Lyons might put pressure on their Legislature not to shut them out from the English market for the benefit of the cotton manufacturers of Rouen or the wool manufacturers of Elbœuf. And so long as the French Legislature held out against this pressure the English silk manufacture would flourish. Workmen would come back to it, capital would again flow into it, new machinery would be invented for it. But the moment that the French Chambers were really disposed to listen to the Lyons cry, negotiations would be opened with the English Government to ascertain whether, if France took off the duties on woollens and cottons England would take off the duty on silk goods. On the principle of retaliation, we should have no choice but to do this. As the duty on silk goods would have done its work, we should be bound in prudence, as well as in honour, to remove it. But with what consequences to Spitalfields and Coventry? Simply that their last state would be worse than their first—that we should have tempted back men and capital for a time, only to alienate them more hopelessly in the end. Substitute agriculture for the silk manufacture, and the fable is equally true of a retaliatory duty on corn. It is fortunate for his clients that, though Lord Salisbury declares himself in favour of fiscal retaliation, it is with the safe proviso—"If it were any longer in our power to resort to it."

Lustra Painting on Fabrics.

This art having now passed through the test of public approval may be said to have taken its place among the permanent pursuits of the tasteful. It is like nothing whatever that has preceded it, but it has been said, among other things, to remind one somewhat of old Spanish decorated leather, of ancient illuminated manuscripts, of cloisonne enamel, of Gubbio ware, and, generally, of monkish work and the work of ladies of the mediæval period. It has moreover been applied to modern design, to which it gives a peculiar character; refining, and at the time imparting to it a tinge of quaintness. The operation is simple. A design having been chosen, it is transferred, by one of the usual methods, to any fabric—furniture velvet, satin, linen, or cloth. This, as the operator chooses, may or may not have an outline of needlework. The paints are dry powders with a metal basis, which gives the finished work when viewed in different positions, as decoration always must be, the reflections and varied play of light which metallic surfaces always lend themselves to. There is no one of these colours of precisely the same tone as any artist's colour; they have a character distinctly their own and include a very considerable range—greens, blues, reds, browns, golds, purples, silver, yellows, lilac. A little of the colour is tipped out into a well-shaped china palette, a little of the prepared liquid medium is added, a stir is given with the brush, and it is ready to lay on. How it looks when it is laid on depends of course greatly on the taste, feeling, and discrimination of the painter; the greater the knowledge and skill, the higher the nature of the result in most cases. "In most cases," because this art lays claim, and does so genuinely, to what no other art ever professed to do, namely, that the wholly uninstructed can, merely by the use of their own natural senses, produce results which are not only highly respectable but will very often successfully compete with the work of a skilled painter. And it really may be regarded as a boon to society that when called upon, as we all often are, to praise our amateur friends' efforts we are able to say honestly without wrenching our consciences that they have really produced a handsome piece of work To accomplish this, however, the amateur must start with a good design, and perhaps it would be the safer ground to go upon, if we were to say that it should not be an amateur design. Not only because there are many chances in favour of the professional design being better, but because those who are fully acquainted technically with the process know of what is capable, and are therefore more competent to produce those designs which are adapted for the purpose. There is scarcely any kind of internal decoration for which this work is not adaped. Wall hangings, curtains, mantel-borders, screens, linen, church fittings, and dresses can be enriched and intensified in effect by this work when the simple material would fall somewhat flat.—*The Artist.*

Commercial Failures.

According to *Kemp's Mercantile Gazette*, the number of failures in England and Wales, gazetted during the five weeks ending Saturday, June 30th, was 1,060. The number in the corresponding five weeks of last year was 992, showing an increase of 68, being a net decrease, in 1883, to date, of 116.

The failures were distributed amongst the following trades; and for comparison, we give the number in each, in the corresponding weeks of 1881 and 1882:—

	1883	1882	1881
Building Trades	110	100	105
Chemists and Druggists	8	7	14
Coal and Mining Trades	12	20	28
Corn and Cattle	26	27	23
Drapery Trades	108	72	96
Earthenware Trades	13	16	8
Farmers	35	45	44
Furniture and Upholstery Trades	20	22	18
Grocery and Provision Trades	201	193	213
Hardware and Metal Trades	33	45	36
Iron and Steel Trades	31	22	19
Jewellery and Fancy Trades	45	40	24
Leather and Coach Trades	64	67	53
Merchants, Brokers, and Agents	116	115	96
Printing and Stationery Trades	24	21	22
Wine, Spirit, and Beer Trades	112	80	102
Miscellaneous	102	100	103
Totals for England and Wales—	1060	992	1004
Scotland	102	93	66
Ireland	18	23	18
Totals for United Kingdom—	1180	1108	1088

The number of bills of sale published in England and Wales for the five weeks ending Saturday, June 30th, was 1,213. The number in the corresponding five weeks of last year was 4,414, showing a decrease of 3,201, being a net decrease, in 1883, to date, of 18,805.

The number published in Ireland for the same five weeks was 166. The number in the corresponding five weeks of last year was 139, showing an increase of 27, being a net increase in 1883, to date, of 179.

Factory Legislation.

The June number of the *Nineteenth Century* contains an article by Mr. A. W. Finlayson, entitled, "Falling Trade and Factory Legislation," the object of which is to show that the "development of manufacturing abroad, aided by parental factory legislation at home, is seriously embarrassing this country." "The Act of 1874," says Mr. Finlayson, "reduced the hours in factories from sixty to fifty six hours per week, and thus struck one-fifteenth part off the entire manufacturing power of the country, as it stopped spinning, the *producer* of all the yarn from which textile fabrics are made, and speeds of spinning could not be increased to make up for the loss of four hours per week. Foreigners buy the same machinery from our best makers, drive as fast, and work seventy-two hours against our fifty-six hours per week. Many say an English operative can turn off more than a foreign one. I can easily understand that a mason, a mechanic, a farmer hoeing potatoes, or any one engaged in manual labour, may, by pushing, do as much in nine as in ten hours; but, in spinning, machinery does the work, the operative merely attends to the machine, and it makes no difference whether she has an English or French tongue—she cannot control the turn-off." An unquestionable advantage would thus appear to lie with manufacturers on the Continent, where the hours of labour are not restricted by legislation, and this position is sustained by figures and facts which are put in a telling manner. For all that, however, we are not satisfied with the evidence. The question is a very complicated one, and involves so many considerations that it would be well for the reader to suspend his judgment until the other side is presented. Mr. Forster, presiding at an early closing meeting, held recently, pointed out the difference between limiting hours of labour in productive industries and reducing them in connexion with shopkeeping. In the former case he admitted that there was a plausible ground for complaint—that there was an apparent loss, which, in these days of competition, was a serious matter, but he nevertheless spoke as if he were satisfied that the loss was only apparent and not real. As a fact, we believe manufacturers themselves--and it must be remembered that Mr. Forster is a Bradford manufacturer—are divided in judgment, and there has certainly not been an expression of opinion sufficiently united and definite to warrant the Legislature in amending the Act of 1874, in the direction suggested. It must be remembered, too, that if profits depend on the hours of workmen, wages are not very remotely dependent on profits, and further, that at all events, the depression in Bradford is not the result of diminished hours, but of a change in fashion. These remarks are only intended to indicate, in passing, the necessity for taking a comprehensive view of the circumstances and conditions under which certain results represented by figures have been brought about. Mr. Finlayson thus concludes his remarks:—In the report of Mr. Baker, Chief Inspector of Factories, from which Sir Richard Cross quoted so largely in support of his 1874 Bill, it is stated that "the medical commissioners have summarized the present grievances of the cotton workers as follows:—1, 'High temperature; 2, ventilation; 3, dust; 4, bad sanitary arrangements; and 5, in the weaving departments from the effects of oversized yarn.'" Yet the Act of Parliament as passed has not a single clause in addition to those which were already in existence, either to mitigate or remove any of the above, which were the real and only grievances. The Act simply removed the operatives *one half-hour* earlier each day from amongst the dust, whereas the most sensible plan would have been to have *removed the dust* and *left the operative*. It would trouble a medical practitioner to define the difference in the effect on the system between working ten hours and working ten hours and a half amongst dust. Mr. Baker's report also stated: "The Commissioners have shown that the processes of reeling, doubling, winding, warping, and weaving have in themselves no debilitating tendency." Employers replied "that of the 450,000 persons employed in the cotton manufacture, 300,000 were to be found in these branches of labour." Yet the Act shortened the working day for these 300,000 without a single argument to support such a step, thus involving these operatives in a loss of wages estimated at £760,000 per annum. Reductions in factory hours have hitherto been brought about by agitation in *busy times*. Parliament has never been guided by any *definite principles;* and I now venture to suggest a system which would stop this spasmodic haphazard legislation. *First*, the existing restrictions on the labour of adults should be reconsidered, and Parliament should fix, say, 60 hours per week, or any other time based on medical testimony, as the maximum working hours of women; after that, *legislative* interference should stop. Further changes should be left to be brought about by ordinary economic and proper causes. *Second*, I would classify factories the same as we classify ships, and make medical inspectors affix bills on the door of each room, stating whether it is first, second, or third class. This would warn operatives what rooms to avoid, or to demand higher wages for working in inferior rooms. It would stimulate mill-owners to employ fans for the removal of dust, to ventilate, and otherwise improve their factories in order to secure the highest certificate. The present system, or rather want of system, of legislation has the very opposite effect. A manufacturer has no encouragement to erect a fine, well aired factory, and no inducement is given to him to improve his works, as he knows not the day when a Government may pass an Act reducing hours to such an extent as to render his business, however healthy, wholly unremunerative, and perhaps compel him to close his works altogether, and throw him on the world without compensation. It is manifestly unfair to reduce the hours of labour in palatial works such as those at Saltaire, with arguments founded on evils existing in wretched hovels of workshops in Black Country towns. After English manufacturers have been so heavily handicapped, it is rather tantalizing for them to be told by Mr. Mundella that other countries "had sent goods to neutral markets which England could have supplied if she had only been wide awake," when he surely knows that at no time in commercial history have English manufacturers been more wide awake and making more strenuous efforts to push sales in every corner of the globe. Instead of increasing our factory hours I would, of course, much rather see foreigners reducing theirs; but it would be more difficult to induce them to do so than to arrange a French Commercial Treaty. It is shallow conceit on our part to continue pooh-poohing foreign competition, and to imagine that we can safely continue to work shorter hours than any country in the world. We have committed a great mistake in enacting laws that raise our cost of production, tie our hands, and prevent us competing in every branch of trade. The union of the engineers of Scotland resolved that overtime rates must be paid for all hours worked after fifty-one hours per week, but, finding after a year or two that trade was going elsewhere, it decided that the engineers should return to the former rule and work fifty-four hours before demanding overtime. With an Act of Parliament, however, there is no such elasticity; in good times or bad times, textile manufacturers and operatives are fixed down. To regain our position we must increase hours of labour in our factories, to enable us, as formerly, to supply the *cheaper* as well as the *better* qualities of goods, otherwise we shall merely retain our trade in specialities. This means stoppage of mills, lower wages, and general depression affecting railway and numerous other interests, and lessening the demand for agricultural produce. Employers and employed sail in the same boat, both have the same interests at stake, but the cry for increased hours must come from the operatives, and I urge them to consider this question calmly and dispassionately. These Acts are insinuating, eating like a canker at the vitals of our industries, on which the greatness of England depends; and if the operatives do not take up the question at once, they may discover their error when too late, and find that they have sucked out the yolk and left nothing but the shell.

The Cloth Trade in London.

The future healthy success of some departments in the city is confidently reckoned upon, while in others the prospects are not considered to be very bright. Amongst the first-named is the broad-cloth division, a large assortment of the various makes mostly in vogue having been ordered, amongst which the cheap 50-inch cloths now so largely sold by drapers in one form or another, figure very prominently, embracing meltons in various new and superior shades of self colours; printed meltons, which so closely resemble the best woven cloths in "feel" and pattern as scarcely to be distinguished from them, save by an expert, the improvement in finish in these low goods being very marked of late, and also the attractive low-priced tweeds, of Yorkshire make, another excellent imitation of fabrics of superior quality. Nor does the extensive sale of these low goods appear to diminish in any appreciable degree the sale of the higher and better class cloths, for which there is as good, if not better, demand than ever; tailors and makers of men's superior clothing being willing to pay full prices for good articles, the object in many directions being to obtain exclusive patterns, or makes, without reference to price in some instances.

The cause of this arises mainly from the fact that cloth, in one form or another, now enters very largely into women's and children's dress, and where cloth dresses were once a comparative rarity they are now freely used by both of the above, and the demand does not appear likely to diminish. Although, as we have pointed out upon previous occasions, complaints have been heard proceeding from cloth manufacturers of business not being so healthy as it was; this result has not happened through any diminution of sales (the contrary being the case, for there has been an increase), but a great many more people have gone into this branch, and no inconsiderable amount of machinery has been lately employed in the Bradford district, turning out light-weighted twill, and other cloths especially fitted for children's and women's use, which in individual cases must have had the effect of displacing goods that used formerly to be taken of a similar character from makers in a different district.

Shippers too, as well as the home trade, have bought cloths freely, which are now being sent to the Continent, the United States, Canada, Australia, &c., &c., and with the increased demand, healthly efforts are constantly being made to perfect manufacturing routine, in finish, dyeing, &c., in the most effective yet economical manner; the result now being that large makers of shoddy cloths at Leeds can buy a whole shipload of rags at Liverpool, and go through the different processes of manipulation upon their own premises, and finally turn out the manufactured cloth dyed, finished, and ready for the use of the tailor or draper, which is justly regarded as a great stride and vast improvement upon the old condition of affairs which used to prevail.—*The Warehouseman.*

The Macclesfield Silk Trade and Foreign Competition.

THE Macclesfield Chamber of Commerce recently had the privilege of listening to two important statements on the condition and future prospects of the trade in which it is specially interested—the Macclesfield branch of the English silk industry. Incidentally, of course, the discussion included the wider subject of the decadence of the entire industry in this country. The President confessed to being discouraged at the little result manifest from his past labours, and at the abject spirit with which the trade seemed to submit to defeat by its foreign competitors. Statements, however, were made which he could not comprehend, and the truth of which he greatly doubted. These were to the effect that Macclesfield manufacturers were beaten out of the market, and could not regain it even if they got their goods woven for nothing. This was an illustration of overdrawing of even the "long bow."

The President of the Chamber determined to find out the truth regarding these serious allegations, and to do so, made a journey to Crefeld, taking with him the secretary. Starting from Macclesfield and travelling via Dover, Ostend, and Cologne, they arrived at Crefeld. One of their first visits was to the new Technical School, a handsome structure, but not quite finished. They were conducted through the establishment, which is fitted up with all the appliances necessary to carrying out on a large scale the various processes of silk weaving, plain and figured, woollen and cotton weaving, winding, and warping. Chemistry, dyeing, and finishing are also taught on the premises, and it is intended to give practical instruction in the spinning of wool in all its branches. The school appears to have been quite successful, starting with five pupils, and now having one hundred and twenty-five, including several sons of Lancashire manufacturers. The machinery in the weaving shed alone cost £6,000, and the Technical Library £1,500. It is supported by the municipality and the Government, the former paying one-third and the latter two-thirds of the expenses. Adjacent to the school is a museum containing a choice collection of patterns in silk, of French, Italian, Swiss, German, and Oriental design and manufacture. The students mix together on terms of perfect equality, all social distinction between the sons of capitalists and those of working men being sunk. The silk looms in use in Crefeld have nothing to distinguish them from those in this country except in one or two points of unimportant details.

Crefeld was found to be a busy town, trade was everywhere good, work was abundant, and the workpeople were earning fairly good wages—from 3s. to 4s 6d. per day. There were no idle workmen in the street, no loungers about the public-houses or wine shops; and in whatever direction the visitors turned weavers were to be seen with warps and shute, or harnesses and reeds. Everywhere they beheld busy activity. The description of work consisted of whole silk goods, unions or cotton backs; in plain and figured fabrics, such as rich dress goods, figured and plain, cut-ups, plain, figured, and cotton-backed velvets, &c. But nowhere did they see any manifestation of skill beyond that possessed by the Macclesfield weaver, and which the latter would be glad to display, provided he was furnished with the opportunity. To what can Crefeld, then, owe its superiority? The Crefeld operatives are not a degraded, impoverished class of people. They are steady, industrious, self-respecting, and respected. They have even a weavers' union, called the Union of the Lower Rhine, and the trade is governed by a list of prices, alterations in which are made from time to time by a joint committee of employers and workpeople, whose decision is binding. Disputes are settled by arbitration, though sometimes this method fails, when an appeal is made to the law. The visitors were told of one case of grievance between an employer and his workpeople, which the former took from court to court, hoping to tire out their opposition or exhaust their means, but in which he failed, as the case finally went against him, costing him a large sum of money. Strikes rarely happen. The union is a provident society as well, and also combines therewith the functions of a co-operative supply association, and even does a little manufacturing. The apprentice system has long since fallen into disuse in the town, but the union regulates to a certain extent the number of learners in the industry.

The social condition of the Crefeld operatives was found to be equally satisfactory. Their clothing was good, and their houses comfortable, in both these respects contrasting favourably with Macclesfield operatives. The women are scrupulously neat and clean, and in going about their domestic duties are remarkably active and quiet. There is no swearing, coarseness, or any other description of vulgarity to be met with in the streets. They are, however, fond of their social pleasures; they love their beer and their pipe; a Crefeld weaver is never seen without his pipe, it is part of his individuality. For drinking habits the visitors thought the palm must be awarded to the German weaver, if comparison be made with his English brother of Macclesfield. But there is no drunkenness or sotting visible, beer is taken as a beverage. Food is about the same in cost; but house rents are higher than in the English town. Altogether the visitors concluded that the average of wages was greater and the standard of social comfort higher than in Macclesfield. This visit has been of considerable benefit in revealing the facts of the case as between Macclesfield and its competitors, and ought to do much to prevent the English industry giving up the battle without a contest. Of some of the causes of the want of prosperity in it we have spoken on several occasions in the past, and may do so again, from another point of view, as revealed in this discussion in its Chamber of Commerce. In the meantime let us solicit both masters and men to display a little more enterprise and spirit, as it is in the lack of these that much of the want of success will be sound to rest.

Receipts for Dyeing.

Saffranine Red on Loose Cotton.

Boil for an hour 100 kilos. of cotton in not too large a bath of 5 kilos tannin and leave the cotton there over night. Remove it and immerse in a cold bath with a decoction of 5 kilos bichloride of tin for 4 hours; wash slightly soaped and dry, but before the dyeing commences the cotton must be moistened again. Finally enter the same into a bath of about 2 kilos saffranine, the latter being sprinkled into the bath gradually while the cotton is worked therein continually. After this heat the bath to 50 degrees. If it be preferred not to soap and dry the cotton after it emerges from the bichloride of tin bath, slightly wash the same with soap after it is dyed, then wind up by drying in a place not too warm.

Silver Grey, for 25 Kilos of Cotton.

To a cold bath there is added a pail full of logwood decoction as well as a solution of 100 grains tannin. Work eight times, and then heat the cotton. Prepare another bath, but before the cotton is immersed add a solution of 300 grains green vitriol. Work six times, wring stoutly, and tranfer to the first bath; work again half a dozen times, and wring.

Deer Brown, for 10 Kilos of Cotton.

Prepare a 40 degrees R. bath; add a perfect solution of 1 kilo cutch. Work eight times and wring. Transfer the cotton into another, but cold bath, containing a solution of 250 grains green vitriol; work four or five times, and wring. Get in readiness another 40 degrees R. bath, with a solution in it of 250 grains chromate of potassa; work five times, and wring. Finally return to the cutch bath, work six times, heat the cotton, wash and wring.

Pansy, for 15 Kilos of Cotton.

Mordant at a degree of temperature of 40 degrees R. with 250 grains tannin, and pass the cotton through it six times, then let it stay there during two hours. Wring and immerse in a fresh bath of 40 degrees, containing 75 grains Methyl violet B., and 500 grains alum, working the cotton therein during an hour, and finally wringing the same.—*Deutsche Farber Zeitung.*

A New Way of Weaving Velvet and Plush.

The common way of weaving the cheap velvets and plushes, so much used at present, is to weave two pieces at the same time, face to face, and to cut the pile between the two warps as it is being formed. Not only piece goods, but ribbons are thus produced largely on the continent, and also in England. The difficulty in the manner of producing the pile lies in the fact that the two warps are drawn together, more or less, by the insertion of the weft; and if care is not taken in this respect the piles will be uneven and irregular, and there will be danger of the warp being cut. A German manufacturer has, therefore, tried to produce plush in another manner, in a cheap way. He puts two warps into the loom, one over the other, but in close contact, and then forms his pile on the top, but in such a manner that he binds alternately the upper and lower warp. It stands to reason that this will enable him to cut the pile in the usual way, as the whole of it is on the surface. When the pieces are finished they only require separating by drawing the pile of the lower piece through the warp of the upper piece. Of course this manner of weaving will only be suitable for light fabrics which allow the pile of the lower piece passing easily between the warp of the upper one. The idea is, at all events, ingenious.

Dirt in Boilers.

The greatest foe to safety and durability of a steam boiler is —pure and simple—dirt. We use the word in its broadest significance, including everything that does not arise from defects of construction. Dirt is a worthless incumbrance and obstruction. In this sense, scab in a steam boiler is dirt and rubbish that should be removed before it has had time to form. The place to look for dirt of this character is remote from the accessible portions. It hides in nooks and corners, and gets swept by the circulation into the bottom of the legs, when there are any, or into the bottoms of the water spaces, except in cylinder boilers, where there are none. In vertical tubular boilers it forms on the crown sheet among the tubes, and it adheres to the sheets all round as high as the water line.

There are facilities for removing dirt from most boilers, but they are of no value if unused. Hand-hole plates are not put on for ornament, or for strength either, but should be taken off, no matter how troublesome to get at, and the dirt removed through the hand-holes. Stir up the dirt thoroughly and often, if the water used is bad, and wash it out with a hose if there is a steam pump in the vicinity, and means to drive the pump when the main boilers are out of use —*Mechanical Engineer.*

The Parcels Post Regulations.

It is no easy matter to understand Government regulations. In the effort to be more than usually precise and extraordinarily clear the primary injunctions are so overloaded with exemptions, and so hampered with definitions as to need very careful puzzling out. Indeed, departmental tradition says that no official order is issued without requiring two subsequent ones to explain it. The annoyance is intensified in dealing with the Post Office, for the public are put straight by a double charge on delivery if anything is wrong, and to save some possible infractions of the Parcels Post requirements we copy the particulars given by a contemporary which, so far as the matter has gone, illustrate the instructions laid down:—

"Any one intending to send parcels by the parcels post should have, besides scales and weights to weigh 1 lb., 3 lb., 5 lb., and 7 lb., a tape measure exactly two yards long. First measure the longest way, which must not exceed 3 ft. 6 in., and then pass the remainder of the tape round the parcel at right angles with the first measurement. If the tape will encircle it in its largest part the parcel is within the dimensions allowed.

"It is among things not generally known that the shape of a parcel greatly affects its capacity. Thus the most capacious box that will go by parcel post is one 24 in. long by 12 in. wide and 12 in. high, its cubic contents being 3,456 in. Any other parcel whether longer or broader, contains less. Cylinder or round parcels would hold a great deal more. The most capacious within the dimensions allowed is 25 in. long by 47 in. in circumference, containing 4,400 cubic inches. Allowing a depth of 1 in., the largest superficial dimensions would be 36 in. by 17 in., or 34 in. by 18 in., both of them comprising 612 square inches. Every extra half-inch in depth would entail one inch less in length, or half an inch less in breadth."

The Yorkshire College at Leeds.

The annual meeting of the members of the Yorkshire College took place at Leeds on the 22nd of last month. The reports of the different departments show that the work done during the past session has been highly satisfactory. In the textile industries' departments especially, the advancement in all the studies has been marked. The instructors (Mr. Beamont of the designing and weaving section, and Mr. J. J. Hummel of the dyeing section), are to be congratulated on the great success that their endeavours to impart instruction to the students have met with. We should have preferred giving the reports of the textile branch in extenso, but the space at our disposal will not admit of this. In the museum of the new College the students of technical industries have placed on view examples of their session's work. Two day and two evening classes have contributed designs, many of which display, not only, excellent execution, but originality and taste. Those of the first year's course gave ample room for selection, and the quality of the rejected show how dfficult must have been the examiner's choice. Good, however, as are these designs, they fall considerably below the comparative standard of the advanced student's work. This department is distinguished by careful and minute attention to details. Turning to the work of the advanced evening classes, we find that in several instances the designs are equal to if not better than those of the advanced day classes. This degree of excellence is all the more remarkable when it is borne in mind that the students of these evening classes are all artisans whose duties keep them closely confined during the day. The junior evening classes also give strong proof of what industry and will may accomplish, even under the disabilities of neglected education, for though the work has few signs of originality, it has every sign of neatness and careful execution. The rest of the exhibition is made up of a display of shawls manufactured by the students, and whose strongest recommendation is that they might have been sold two or three times over. There are, moreever, numerous prettily designed and well-finished specimens of cloth for suitings, worsted coatings, and other staples. One of them, intended for gentlemen's dressing gowns, is claimed as a peculiar exhibit, the figures being fast, and not loose as is the case ordinarily. Samples of wool and of dyeing substances are not wanting to complete a display which attracted some attention. The following is a list of the prize winners in the day and evening classes of the textile branch:—

Day Classes.—Textile Industries (Instructor, John Beamont.)—Advanced Class—Reuben Gaunt, 1st cert. for general work, prize and 1st cert. for designs in worsted coatings (double cloths), and 2nd cert. for designs in mohair mantle cloths; Hugo Dolge, 2nd cert. for general work, prize and 1st cert. for designs in ladies' dress goods, and prize and 1st cert. for designs in mohair mantle cloths; Thomas Hirst, 3rd cert. for general work; Edward William Hinchliffe, 2nd cert. for designs in worsted coatings (double cloths); Ernest Gaunt, 3rd cert. for designs in worsted coatings (double cloths). Elementary Class.—Charles Herbert Walsh, 1st cert. for general work, prize and 1st cert. for designs in worsted coatings (double or backed), and prize and 1st cert. for designs in woollen goods; William Earnshaw, 2nd cert. for general work; Jesse Houghton Metcalf, 3rd cert. for general work, prize and 1st cert. for designs in ladies' dress goods, and 2nd cert. for designs in worsted coatings (double or backed); Carl Uhlenberg, 2nd cert. for designs in woollen goods, 3rd cert. for designs in mohair mantle cloths, and 3rd cert. for designs in ladies' dress goods; Harvey Swithenbank, 2nd cert. for designs in ladies' dress goods; John Mosley, 3rd cert. for designs in worsted coatings (double or backed); Joseph Hume Clapperton, 3rd cert. for designs in woollen goods.

Dyeing Department (Instructor, J. J. Hummel, F.C.S.).—Lectures on Colouring Matters—John Stansfield, prize and 1st cert.; A. Siebold, 2nd do.; Joseph Blackburn, 3rd do. Dyehouse Practice (second year)—John Stansfield, prize and 1st cert.; Arthur Hemingway, 2nd do.; Alfred Siebold, 3rd do. First year—Horace Bagster Wilson, prize and 1st cert.; Rowland Ernest Oldroyd, 2nd do.; Arthur Henry Wardle and Richard Clowes (equal), 3rd do.

Evening Classes.—Textile Industries—Advanced Class—Fenwick Umpleby, prize and 1st cert for designs in matelassé goods, and prize and 1st cert. for designs in worsted coatings (double cloths); John Gaunt, 2nd cert. for designs in matelassé goods; Samuel M. Kay, 2nd cert. for designs in worsted coatings (double cloths); John Muff, 3rd cert. for designs in matelassé goods; John Burnet Smith, 3rd cert. for designs in worsted coatings (double cloths). Elementary Class—J. Addison Walker, prize and 1st cert. for designs in woollen goods; T. Augustus Marriott, prize and 1st cert. for designs in cotton warp goods; Thomas Charlesworth, 2nd cert. for designs in woollen goods; Jonas Glover, 2nd cert. for designs in cotton warp goods; James Eckford, 3rd cert. for designs in woollen goods; Samuel Boyes, 3rd cert. for designs in cotton warp good.

Dyeing Department.—Lectures on Natural Colouring Matters—Margerison Rhodes, prize and 1st cert.; Kirkwood Hewat Garvie, 2nd cert.

ORIGINAL DESIGNS.

On our first plate we present to the notice of our readers a very tasteful design for Cotton Dress Goods. Of course much must depend upon the manner in which a design of this class is coloured, and as it is impossible for us to give any definite idea of the designer's ideas in the present case, we shall leave it to the judgment of those who may deem it worthy of their attention. The designer is Mr. J. L. Horner, 57, Dodworth Road, Barnsley.

* * * *

Our second design occupies a double page, and shows a very effective pattern, intended for a Brussels Carpet and Border. This is also the work of Mr. J. L. Horner.

* * * *

*** We beg to inform Manufacturers and others that adaptations of Designs, published in the "Journal of Fabrics and Textile Industries," can be made at the Office by experienced Designers, and that Original Designs can also be furnished at moderate charges.

Prize Competition.

It has been suggested to us, by some of our readers, that it would be advantageous to a section of our subscribers, to hold a Prize Competition in connection with the designing portion of the Journal. After mature consideration we have decided to comply with their wishes, hoping that, by so doing, we shall forward the interests of both designers and manufacturers of textile fabrics. Our first competition will take place this month; a number of our subscribers have already placed their names upon the list, and we are desirous of adding to that number. The following prizes are offered for the best set of Six Designs in any class of Woollen or Worsted Cloth suitable for gentlemen's wear.

First Prize, £2; Second Prize, £1; Third Prize, 10s.

Should sufficient interest be taken in the affair by our readers, it is our intention to repeat the Prize Competition at short intervals. Particulars and conditions may be had by applying to H. and R. T. Lord, 3, Gerrard Street, Halifax.

MONTHLY TRADE REPORTS.

Wool.—In London, since the close of the sales on 22nd of last month, business has exhibited a healthy tone, the remarkable uniformity in the level of the prices which has characterised the market for over two years, has, during the series of sales just closed, received a fresh illustration. Variations in tone there have been, and purchasers have at times found it more easy, and at others more difficult, to operate, but these small fluctuations have made no substantial alteration in the position of the article, which, taking it all round, remains practically the same as last series. In Liverpool, business has been of a dragging nature, prices for good parcels keeping tolerably firm, but for inferior sorts a lowering tendency has been observed. In the Scotch districts, an average business has been passing. In the Yorkshire manufacturing centres, wools of a good quality have met with the best sales, while the medium and lower sorts have only sold indifferently; prices keep firm In the yarn and piece branches, business for good qualities has been satisfactory, but for lower qualities it has been of a dragging nature. At the country wool fairs, business has been mostly done at the rates ruling during the past three months.

Cotton.—Business has not been in at all a satisfactory condition during the past month. Apart altogether from the insufficiency of prices, at any rate in the cloth departments, to yield a profit to manufacturers, continual complaints have been met with of the difficulty of selling at regular prices except on a small scale. There has been, indeed, almost daily in nearly all sections a demand for fair, and now and then for large, quantities, but the difference—sometimes only very slight—between the views of buyers and sellers has been irremovable, and many orders have been sent back as impracticable. In some cases, especially where early delivery was not required, producers have accepted freely, even at a trifle below current rates, offers for distant delivery, and in this manner individual sellers have managed to strengthen their position very materially. Then, too, at the close of last month the production was already very extensively under engagement in several leading departments, and notwithstanding the want of animation observable during June the contracts still held are on the whole large. Owing to this circumstance prices keep firm.

Woollen.—In this branch of trade business has varied somewhat. At Leeds there has been a fairly active business passing at firm rates, the demand chiefly running upon good worsteds, fancy tweeds, twills, and light materials for overcoatings and ladies' wear. The shipping firms have been moderately busy, and favourable reports continue to come to hand from abroad. In the heavy woollen districts trade has not been above the average, but prices keep firm. In Huddersfield, the worsted coating branch has been good, but in other departments business cannot be said to have been in a satisfactory condition. The shipping branch has been rather inactive. Prices, as a rule, keep firm, owing to the firm state of the wool market. In the Scotch districts, business has been about an average one, with no active production for any particular class of goods. Prices, however, keep on the whole firm.

Linen.—There has been a moderate business passing during the month in linens, perhaps not so much as a few weeks ago, still trade is not in an unsatisfactory condition, prices as a rule are firm. In the jute branches, a considerable business has been done, at slightly increased rates, and manufacturers are still well employed. The market for flax and tow yarns has been fairly good, and prices have been very firm, and in many instances advanced rates have been secured.

Lace —There has been a want of animation in the lace trade for some time past, and we are not able to chronicle much improvement during the past month. There has been a limited inquiry for most descriptions of cotton laces, and prices have consequently given way in a slight degree. Most kinds of silk goods have met with a dragging sale, at unremunerative rates. In the curtain branch very little improvement has taken place. In some branches of the hosiery trade a moderate business has been done, but on the whole, this industry has also been inactive.

Carpets.—Some branches of the carpet trade have improved slightly during the latter part of the month. The tapestry trade has partaken of this improvement, and more looms are now at work on this fabric. In the Brussels department a fair business has been passing, and manufacturers have been fairly employed. The rug trade has been as good as could be expected at this time of the year, being between seasons. Prices on the whole have not shown any change in value.

In Blackburn at present there are 88 firms, with 123 mills, containing 1,477,991 mule spindles, 87,100 throstle spindles, and 60,286 looms, employment being afforded for 33,744 workpeople, out of a total population of 105,000. There are engaged in both spinning and manufacturing, 32 firms, with 59 mills, containing 1,418,051 mule spindles, 87,100 throstle spindles, and 28,834 looms, employing in all 19,765 workpeople. Only two firms are engaged in spinning entirely. Their mills contain 59,740 spindles, and employ 230 workpeople. There are engaged entirely in the weaving branch 54 firms, with 62 sheds, containing 31,350 looms, and employing 13,750 workpeople. It is computed that 1,564,891lbs. of cotton are used in the spinning mills each week, while there are woven 2,414,000lbs. of yarn per week, of which over 1,000,000lbs. are imported from Oldham and other towns. The cloth manufactured in a year is valued at nearly six and a half millions sterling, and it is estimated that nearly three millions sterling of capital is invested in the trade.

12TH JULY, 1883.

DESIGNED BY J. L. HORNER.

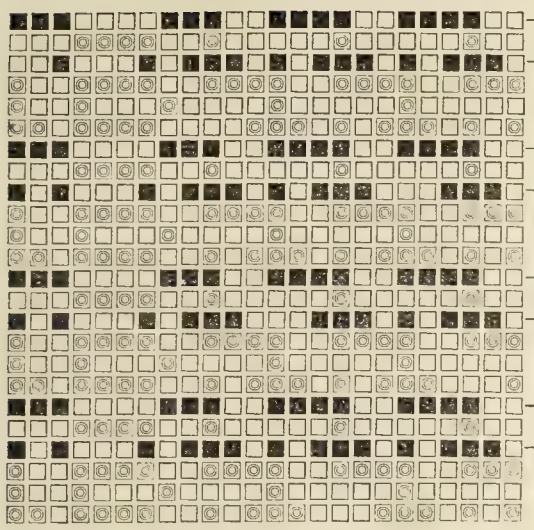
PRINTED DRESS GOODS.

BRUSSELS CARPET.

ORIGINAL DESIGNS.

Worsted Trousering.

No. 83.



Weft:
3 Dark.
1 Medium.
1 Dark.
1 Medium.
3 Dark.
1 Light.
1 Dark.
1 Light.

Design.

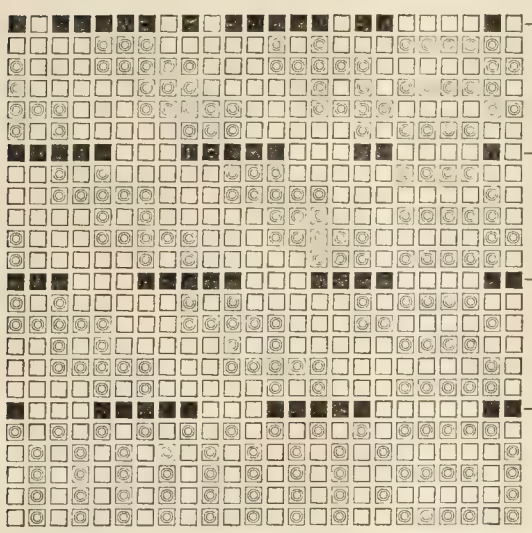
Warp : 3 Dark.
3 Very Light.
3 Medium.
3 Another Light.

5544 threads in the warp.
84 threads in an inch.
66 inches in loom.
90 picks per inch.
14's reed.
6 threads in a split.
56 inches finished.

Warp and weave as particulars.

Worsted Suiting.

No. 84.



Design.

Warp : 5 Dark twist 2/48's.
1 Lively twist 2/48's.

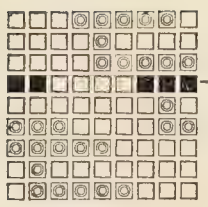
Weft : 5 Dark single 1/20's.
1 Lively twist 2/48's.

5544 threads in the warp.
84 threads per inch.
66 inches in the loom.
90 picks per inch.
14's reed.
6 threads in a split.
56 inches clear finish.

Warp and weave as particulars given. Draft straight over.

Fancy Worsted Suiting.

No. 85.



Design.

Warp : 4 Black 2/48's.
1 Light 2/48's.
1 Dark 2/48's.
2 Light 2/48's.
1 Dark 2/48's.

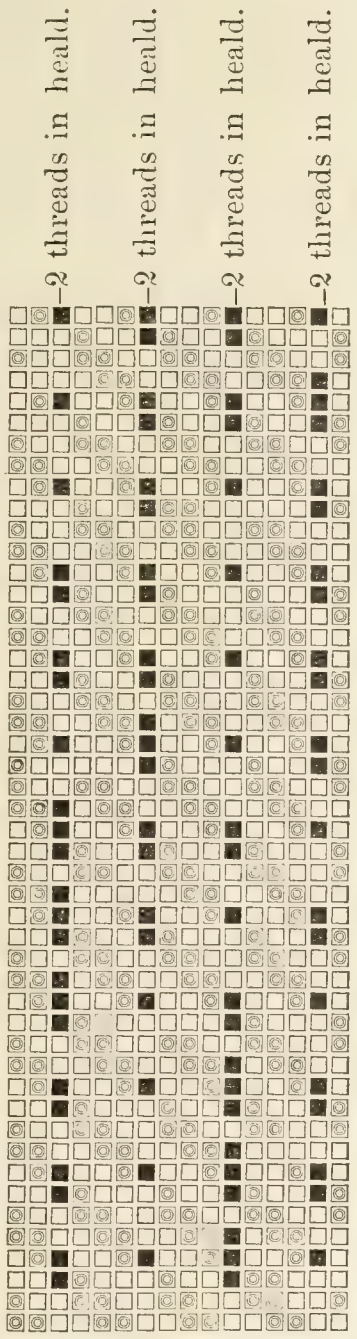
Weft : 7 Dark 2/48's.
1 Lively 2/48's.
1 Dark 2/48's.

5544 ends in the warp.
84 ends per inch.
66 inches in the loom.
14's reed.
6 threads in the split.
56 inches finish.

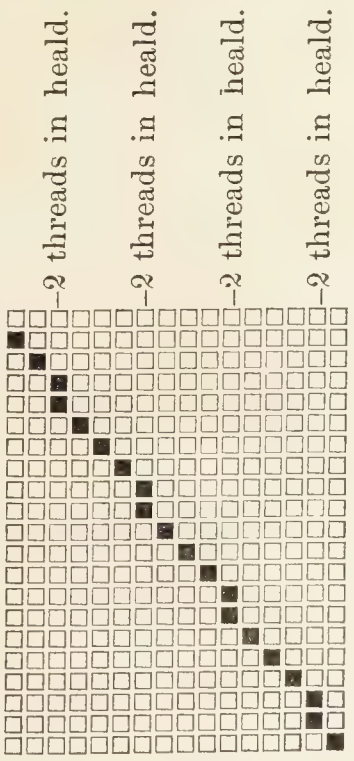
Warp and weave as particulars.

Cheviot Suiting.

No. 86.



Plan.



Draft.

Warp : 3 White.
1 Tan.
1 Black and White twist.
1 Bronze Green.
2 White.
1 Tan.
1 Bronze Green.
3 White.
1 Tan.
1 Orange and Green twist.
1 Bronze Green.
2 White.
1 Tan.
1 Bronze Green.

20 ends.

Weft : 2 White.
1 Brown.

3 picks.

Warp 16 skeins.
Weft 16 skeins.
Fancies 36 skeins twisted together.

2304 threads in the warp.
36 threads per inch.
64 inches in the loom.
36 picks per inch.
9's reed.
4 threads in a split.
56 inches when finished.
Cheviot finish.

The Huddersfield Fine Art and Industrial Exhibition.

THE opening of the Fine Art and Industrial Exhibition at Huddersfield, took place on the 7th instant, and judging by the number and excellence of the exhibits, the venture ought to be a great success. In a former issue we gave an illustration and description of the building which has been erected for use as a Technical School; this building, for the purposes of an exhibition, was found inadequate to meet the requirements of the large number of exhibitors, a spacious annexe has therefore been erected, and has already been well filled with a great variety of exhibits. It is not our intention in the present issue to give a full account of these, as we intend during the time the exhibition is open, giving descriptions of the machinery, &c, which may be of most interest to the textile trades. At present many of the exhibits are in an incomplete state, but in a few days, it is expected that everything will be in complete order. A large shed (part of the annexe) is mostly devoted to machinery in motion; this shed measures 175 feet by 82 feet; our readers may, therefore, form an idea of the large quantity of machinery required to fill such a space; nevertheless, the whole of this area is occupied by textile and other machinery, by some of the best makers in the country; the exhibits in this shed are of a very high class character, especially those shown by local manufacturers. In other parts of the building are shown the various processes of the manufacture of cloth, &c. The Fine Arts are well represented. It is to be hoped that the committee who have undertaken the work, may meet the success they fully deserve.

Indicating the Waste of Power in Friction.

The frequent use of the indicator for determining the amount of power consumed in driving shafting is of great value. From 30 to 50 per cent. of the power of engines is ordinarily used for this purpose. The running condition of shafts and bearings, the alignment, the quality of the lubricant, and the tension of the belting, all have an important effect on the amount of power used in friction. These are every one liable to change. The difference in the friction of a line of shafting in perfect order, and the same not in perfect order, may not be such as to attract attention by any outward sign. But the indicator will show a difference, and it is liable to be of considerable amount. The repeated employment of the indicator for this purpose is a simple and certain means for showing changes that may occur, and furnishes a reliable indication as to when this important consumer of power needs attention. The friction of the shafting and loose pulleys in a certain new building was found by indicator test to consume 19·34 horse-power. At the expiration of fifteen months a similar test of the same shafting showed a consumption of 26·64 horse-power, being an increase of 38 per cent. As far as those having charge were aware, the bearings and all the conditions were practically the same as before. A test on another engine showed an increase in friction amounting to 44 per cent. after the expiration of five months. The use of the indicator, the determination of the actual performance by tests of boilers and engines, the careful examination of the uses to which steam is applied, not only detect the first source of waste, but locate the place of the second, and point to remedies for both.

The Fitting of Belts to Machinery.

In the fitting of belts to machinery in order to effect the greatest saving both in the ultimate cost of belts, and in the proper driving of machinery, opinions differ considerably. A workman, who has had much experience in this department, says the true way to belt up machinery, and have it to do good service, and last well, is to get a belt a little wider than the machine calls for; instead of procuring a three inch belt where a four inch one at least is required, get a five inch instead, if it can be possibly used. By doing this the belt will not have to be put on so tight that before it will do its work it must be tuned up to concert pitch. All machines, however, are fitted up with certain widths of pulleys, and therefore we cannot go beyond a certain limit here; but to go back to driving lines of shafting, each person can use what he pleases, there being no limit given, but to use good reason in the matter, not putting on belting that will be heavy, and consequently clumsy, but that which is heavy enough to do the work with ease, and a little margin for extra pressure. In this way the expense of belt grips will be overcome, and money saved. It is most advisable to keep all belts clean, and occasionally, as the case may require, use with care and judgment, good pure neatsfoot oil. Care should be taken in this work so that it should be done well. Anybody using belts in the above manner will be amply rewarded for the trouble taken, in the extra work they will do, and in the saving of expense in the extra time a belt can be used.

The Irish Lace Exhibition.

The Irish Lace Exhibition, which is being held at the Mansion House, London, and which was opened on the 25th of last month, has aroused great interest in this branch of industry, and bids fair to be of benefit to that portion of the Irish population whicih is mostly interested in it. The *Warehouseman*, in a report of the Exhibtion, says the immense amount of machine made lace now worn by every class of society, far from injuring the higher branches of the trade, should only spur on to fresh exertions, since, as it is abundantly proved in the able pamphlet prepared for visitors to the exhibition, the productions of the machine are actually wholly dependent on the artistic merit of those made by hand, and if one fails the other goes with it. There is no competition between the two, for one is the outgrowth of the other, as printed cretonne is of tapestry; and who shall say that the enormous supply of the former has damaged the demand for the latter? On the contrary, both have their own established position in the world.

In the history of lace there have been ups and downs, as in every other history; the most serious vicissitude occurring at the time of the French Revolution, when the introduction of the classic mode of dress, with its softly falling draperies and severely simple outlines, caused a decline in the manufacture of lace throughout Europe. As usual, when the reaction came, there was a mania for the lately-despised adornment. Rescued from oblivion, in the first instance by a small clique of literary ladies, lace soon assumed full sway over the feminine mind, and its reign has not since been interrupted to any serious extent.

Irish lace is of comparatively modern date, extending back no further than the beginning of the last century, when a patriotic club was formed, one article of which was that "Ladies wear only Irish manufactures." This was countenanced by Swift, who lent his powerful pen to the cause, and in 1765 the Irish club of young gentlemen passed a resolution refusing to toast any lady who indulged in French or foreign fripperies. The name of Lady Arabella Denny is nobly associated with the first efforts of Irish lace making. After her death, in 1792, there is a dismal lapse into the former condition of things, owing no doubt to the aforementioned caprice of fashion, which almost totally excluded lace from the toilets of the fair. It was reserved for the present century to once more raise the industry and place it in a far higher position than it ever before occupied.

In 1829 the manufacture of Limerick lace was established by the enterprise of one Charles Walker, who brought over from England twenty-four girls as teachers in the art of tambour work. This in time met with such success that in about 1844 dresses were ordered by Lady Normandy, wife of the Lord Lieutenant. her Majesty the Queen of the Belgians, and the Grand Duchess of Baden. In 1855 there were 1,500 workers employed, and the beauty of what they produced may be seen in the tunic lent by the Prince of Wales to the present exhibition. Another specimen was a fan mount executed by Miss Elizabeth Laird, which won the first prize at the exhibition of the Fanmakers' Company, held at Drapers' Hall in 1878, and is now in South Kensington Museum. For exquisite grace of design and delicacy of execution this rivals the productions of the best foreign schools, and is highly valuable as showing what degree of perfection may be attained in Limerick lace, which of late years has miserably declined both in quality and in quantity produced, not more than 300 workers now being employed. This is partly accounted for by the emigration of girls to America, and the employment of many in cheap glove manufacturing, &c.; but it is both significant and alarming to learn that at the present time there is not one girl in Limerick learning lace-making as a means of livelihood, while the comparative poverty of Limerick exhibits at the Mansion House seems to foreshadow the cessation of a once flourishing industry, unless a new impetus is now given to it, The famine of 1846 was the primary cause of most of the now flourishing lace schools. The Irish ladies, looking round for some means of enabling the thousands of orphan children left to gain a subsistence, turned their eyes hopefully towards lace-making. Lady de Vere taught the art of making appliqué, giving her own Brussels lace as patterns, and the successful result gained the name of "Curragh point."

At Youghal the good sisters of the convent brought out their beautiful old lace, and taught the children in their schools to copy it. At Belfast, in Miss Jane Clark's school, imitations were essayed of the finest old Spanish and Venetian point, specimens of which at the Kensington Museum can hardly be distinguished from the original. Tatting was introduced in County Fermanagh by Lady Erne, and in Ardee by Miss Sophie Ellis. Crochet was extensively taught at Clones by Mrs. Hand. At Tynan, Armagh, the same noble work was performed by Mrs. Maclean, who instructed the poor peasantry in the imitation of old point lace. This was afterwards carried on at Innishmacsaint, from whence it receives its name; and so on, in every instance the industry has been started by the single-handed efforts of some good women. Now that the chief difficulty is passed, and the great work really set going, it only remains for continuous effort to be made to bring the art to as great a perfection as in the schools of Belgium and France; for, says the jurors' report of the International Exhibition, 1862, "The women of Ireland have undoubted aptitude for lace-making."

The exhibition, which is most admirably and comprehensively set out for the convenience of visitors, includes specimens of every kind of lace-work executed in Ireland, with the singular exception of Valenciennes, of which we do not remember to have seen a single example, though certainly as late as 1875, it was made in the schools of the Countess of Erne, at Lishnakea, in a way that rivalled the famed productions of Ypres.

MACHINERY, TOOLS, &c.

Striped Fabrics in the Hosiery Trade.

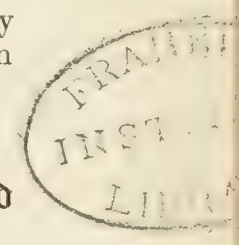
Messrs. Crow and Truelove, of Hinckley have introduced a "Jacquard and clipping apparatus applied to circular frames for making striped fabrics." Hitherto circular striped patterns have been necessarily of a broad type, as the machine has had to be stopped *each time* the colour of the thread has been changed, and the stripes have been irregular in width, as with the greatest care the operator could not avoid working, at times, a course less or more, and the junction of the two colours has been at irregular intervals. By the working of the "patent jacquard," *no stoppage* is required, and the joinings are always at the same place, and are almost imperceptible. At the same time single course stripes, and the most intricate patterns may be produced, such as previously could only be made on rotary or hand frames. It is best adapted for men's half-hose, which can be retailed by the shopkeeper at from 6d. to 1s. per pair, according to the quality of the material used. The machine has been invented and patented by a Nottingham mechanic, who has spent several years in attaining a satisfactory result.

Brigg's Warp-Beam Motion.

There has recently (says the Bradford *Observer*) been brought under our notice a warp-beam motion for looms, which is being extensively adopted by manufacturers in the Bradford trade and in Lancashire, and which promises fair to supersede in a not very long time the existing cumbrous and awkward arrangenent. Many attempts have been made since the intoduction of the power-loom to substitute for the simple break of a rope twisted around a barrel at the end of the warp beam, and tightened by a lever, upon which are suspended a number of weights, some mechanical combinations of springs or levers which should be less unwieldly and less irksome to the weaver in manipulation. But, apparently, persistency in the attempt has only hitherto resulted in consistent failure, for although over 700 patents for such an invention have been taken out, the rope levers and weights are practically universal at the present moment. Mr. T. H. Brigg, of Bradford, claims, however, to have solved the knotty problem, and has produced a patent warp-beam motion which is simple, effective, and appears to be a practical success. In this patent the beam ends rest in a swiveled bracket, which adapts itself to the wear of the parts, and always allows the beam to "bed." Over the bracket is a clip brake-block of iron with a lubricator. Pressure on this brake-block is obtained by a simple pair of bell-crank levers and one weight lever, with a comparatively light sliding weight. By an arrangement, analagous to the familiar lever handle on a platform weighing-machine the load on the beam may be instantly thrown off, so that the warp-beam may be set back or moved round with the greatest ease, while when the weaver is ready to proceed with the work the load may as readily and instantly be applied. The advantages in being able to dispense with the lifting off and on of the ordinary weights must be obvious to every manufacturer, but the more serious question is, of course, whether the motion is effective and invariably to be depended upon while the loom is in operation. This, of course, is a question which only experience can answer, and the inventor's claim to success rests upon the fact that several English firms, including Mr. Henry Mason, Messrs. W. Ramsden and Co., Great Horton, and Sir Titus Salt, Bart., Sons and Co., have already applied his motion to several hundred looms, and that in some cases it has worked satisfactorily for the last two or three years.

The Manufacture of Figured Rugs.

An improvement in the manufacture of rugs which has recently been patented consists in the weaving of them, with the backing presenting a plain appearance like that of the well-known "finger rug," whilst the face of the rug is composed of woollen, or other yarns, woven over wires, in any required design, and in any variety of colours, by the aid of the jacquard, the pile formed being cut in the ordinary manner. In weaving the rugs a loom is employed which is mounted with two warps, the one forming the usual backing of jute, hemp, or such like material, whilst the other, forming the pattern face, consists of woollen and other suitable yarns of the required number of colours according to the design used, the yarns being connected with the jacquard machine and supplied from the usual bobbin-frame. According to the number of colours employed, so will be the number of yarns passed together through each dent of the reed, but each different coloured yarn is passed separately through its own "mail," thus, supposing only three colours are required, say, red, black and blue, these three, after passing separately, each through its own "mail," unites and passes together through one and the same reed dent. The "lashes," carrying the said "mails," are attached to the cord of a jacquard, so mounted as to lift one colour only, each colour being lifted by itself. In weaving, each wool yarn is brought up separately, but the entire wool warp is lifted bodily and raised out of the way during the time the backing is being woven; for this purpose the several "lashes," whilst being free to be lifted separately by the cords of the jacquard, are also arranged so as to be lifted bodily or together at will, this lifting of the entire wool warp being effected by a "shaft" threaded through the several "lashes" in such a manner that, whilst it allows perfect freedom to each "lash" to be lifted separately by the jacquard, it will, on being itself raised by a lever under the control of the weaver, lift the whole of the "lashes" together, independently of the jacquard and thus raise the entire wool warp for the purpose above stated. The mode of weaving the backing, and the mode of binding the wool warp to the said backing by a shoot of backing weft, after the insertion of the wire to form the pile, will be readily understood by carpet weavers. The inventor says he is aware that pattern rugs, having a plain backing and a figured face, have been made by binding a parti-coloured weft, of what is commonly known as "chenille," on to a plain backing, and also that, what are known as "beam rugs," having no definite figured pattern on the face, have been produced, and therefore he does not claim such manufacture, but what he claims as original is the peculiar manufacture of hearth and foot rugs as above described, having a plain backing and a figured face of any required design, woven in a loom with a jacquard machine or an equivalent mechanism.



Improbements in Looms for Weabing Carpets and similar Fabrics.

In the looms of the class known for the past few years as "Moxon" looms, various improvements have been made from time to time, one of the latest of which relates to the construction of the wire motion, the object being to simplify and improve it, in order to reduce the wear and tear of the parts, and enable the loom to be driven at a higher rate of speed than has hitherto been practicable. The improvement under notice was patented about nine months ago. In Moxon looms, as generally constructed, the heads of the wires are arranged to slide to and fro in grooves in a table or "hopper slide," that is to say, the head of the wire slides in a groove parallel with the raceway of the loom, while the wire is being withdrawn from the carpet or other fabric by the "hopper" or sliding block, and the head slides in a groove at an angle to the first one when the wire is being re-inserted in the fabric. To move the free end of the wire from its position when withdrawn to that necessary for its re-insertion in the fabric, a horizontal leaver is pivotted at one end and rests upon a support at the other end, near which is fixed to it an arm or "break" to engage with the wire, and the lever is adapted to be moved in one direction by means of a pin or arm projecting from the sliding block or "hopper," and to be be held by a catch until the wire is withdrawn from the fabric, when the lever is moved to its original position by the force of a weight after the arm or projection has acted upon the catch and released the lever. This arrangement involves a considerable amount of labour in the manufacture of the loom, and, moreover, it renders the parts liable to a great amout of wear when the loom is worked at a high speed. According to this invention a number of the parts hitherto employed are dispensed with. The inventor, in describing the construction, says:—I employ the sliding block or "hopper" for withdrawing and re-inserting the wire, and the hopper-slide having the two grooves in which the wire-head is adapted to slide, as in the ordinary Moxon loom, but in place of the lever and other parts for moving the free end of the wire from one position to the other, I employ an arm operated by suitable mechanism in such a manner that it will move to and fro at right angles to the raceway or lathe bottom of the loom. This arm is fixed at one end to a horizontal bar or rod carried in one or more suitable bearings attached to the frame of the loom, and at the other end the arm has a fork or beak to engage with the wire. The underside of the beak is

in contact with the upper surface of the table or "hopper slide," so that, as the break is moved to and fro, the wire cannot slip under the same. The bar or rod is, according to one arrangement, connected to one end of a lever pivotted on a pin or stud fixed to the frame of the loom; the other end of the lever is provided with a stud carrying a friction roller, which runs upon a cam fixed upon the lower or treadle shaft, and which is held against the cam by the force of a spring attached at one end to the lever, and at the other end to the frame of the loom. The cam is so constructed that the arm will move once to and fro for every two beats of the lathe. By means of this improved construction the number of working parts of the wire motion is considerably diminished as compared with that heretofore employed, and the wear and tear are consequently reduced. Moreover, a loom provided with wire motion constructed according to this invention can be worked at a much higher rate of speed than the looms as heretofore constructed, and does not require such frequent repairs. It is obvious that I may employ other means than those above described for imparting to-and-fro motion to the said arm and sliding-bar or rod, for the purpose of moving the free ends of the wire as above set forth.

Book Notices.

COMPARATIVE YARN TABLES.—Computed and Arranged by McLENNAN, BLAIR & Co., Yarn Merchants, Glasgow.

This work contains a series of yarn tables arranged and computed with the principles of the counts explained from No. 1^s to No. 600^s cotton scale, with the relative counts in every scale currently in use in the silk, cotton, woollen, worsted, and linen yarn trades in various parts of the United Kingdom, and on the Continent. The tables are got up in a very concise form and in such a manner that the various scales and counts can be seen at a glance In book form they are published at 6d., and in sheet form at 4d. per copy. To manufacturers, spinners, merchants, and others interested in the textile trades, this work ought to be especially useful, and we would urge upon them the desirability of their procuring and perusing the guide, as it is undoubtedly worthy of their earnest consideration.

HANDBOOK OF THE HOSIERY INDUSTRY OF THE UNITED STATES.—By MAX JAEGERHUBER, West Broadway, New York.

This work, which treats of the hosiery branch of the textile manufacture in the United States, gives a vast quantity of information, both historical and statistical, and also a list of merchants and manufacturers, which cannot fail to prove of great value to all interested in this particular branch of trade, both in the States and in our own country. The hosiery industry of the United States has, during the past few years, made very rapid strides, and, judging by the facts given in this work, has made considerably greater progress than we were hitherto aware of. The work, commencing with a history of the hosiery trade in the States, is followed by an accurate account of the industry in England and the various countries in Europe, where the trade is now carried on. Some very able remarks on the inventions of recent years (English, American, French, &c.), are next given, which are of considerable interest. In addition, the work gives a series of articles on preparing, spinning, weaving, dyeing, &c., different fibres used in the industry, which will be particularly acceptable to a large class of manufacturers. There is no doubt the work will be appreciated, not only in the United States, but in all English speaking countries, in which the hosiery trade is carried on, and, as a book for the manufacturer's and merchant's library, will prove a very valuable acquisition, and will also be heartily welcomed by a large section of those engaged in the textile trades.

The Calico Printers' Garden Party at Manchester.

The second calico printers' garden party was held in Manchester on the 23rd of last month, and was a great success. The predominant feature of the materials worn was floral patterns, rather large and, as becomes summer weather, the grounds, or, as the printers say, the blotches, were chiefly in light delicate shades. Printers have improved greatly in their blending and balancing of colours, and perhaps, too, the wearers have had their taste improved, for it does not always lie with the printer to say which colourings he shall sell. One or two colourings, we are satisfied, were not recommended by printers' salesmen as either safe or beautiful. Checks were in considerable variety; the effects produced in these were frequently very pretty. It requires a closer inspection than is quite *en règle* to pronounce whether these checks are woven or printed sometimes. Of course, the printed check has much the best of it should the dress ever be washed. Spots were also well represented: large close spots in the fashionable colours, say two shades of crushed strawberry, or the new green, &c. They looked stylish, and in the newest fashion. The fashion may not last long, however. On the whole the party was a gay sight, and was very enjoyable. If printers could only come to some agreement not to sell their beautiful artistic designs at less than, say 2s. 6d. a yard, the upper ten thousand would no doubt continue to wear prints. But, as we said elsewhere, the printing machine is too democratic. Poor people can buy a good print, and the printer looks much more to the middle and poorer classes for support—quantity is what he must have. It looks as if it were now established for some years to come that prints will be a favourite dress for English maidens. The dressmakers' art was more successful than last year in showing off the prints, and the ladies looked more at home in them. Last year every lady appeared to be wondering how she looked in her new and novel costume; this year she is accustomed to gay print dresses, and looks at ease in them. There were very few monstrosities in design or colouring at the party.

ODDS AND ENDS.

An international exhibition of manufactures, fine arts, and agriculture, will be held at Nice, from December 1st, 1883, to May 1st, 1884. Forms of application for space in the British section, and all further particulars, may be obtained by intending exhibitors, from Mr. Edmund Johnson, International Exhibition Offices, 1, Castle Street, Holborn.

* * * *

We learn from *Il Sole* that Count Giovanni Pullè, who has resided in Australia for the past seven years, and has lately returned to his native place, Modena, is agitating in Modena for the formation of a strong Italo-Australian Society, to facilitate and extend commercial relations between Italy and the Australian ports in general, and Brisbane in particular.

* * * *

The flax crop in Ireland is promising well. During the past month a good deal of rain has fallen over Ulster, and this has greatly helped the growth of the plant. There can be no doubt the area under flax is smaller than it was last year. It is believed that the quantity sown will cover about 90,000 acres. No official return of the area has yet been published.

* * * *

At the Oriental Exhibition in Bond Street, London, recently opened by Mr. Astley Cox, are many examples of the skill of Japenese artists, in painting on tissues of silk, such as ribbed fabrics, satin, uncut and cut velvet. In depicting animals, more especially monkeys, birds, and fish, the Japanese are very skilful. Among the interesting specimens shown are several signed by well-known artists who send their work to the Exhibition at Tokio.

* * * *

An important congress, having for its object the opening of new markets for the foreign trade of Spain, will probably be held in the Spanish capital during the coming autumn. The Geographical Society of Madrid have been in communication with the Board of Directors of the Madrid Mercantile Club, upon the subject of a proposed congress to discuss and to arrange for one or two expeditions next year into the centre of Africa, and the immediate establishment of trading stations in the Gulf of Guinea, in Barbary, and in Borneo The Directors of the Mercantile Club have promised the heartiest co-operation and moral support of that association.

* * * *

The *Gazette* contains a copy of a Treasury Warrant, giving the text of the regulations with regard to the Parcels Post, which will come into operation on the 1st day of August next. The substance of the regulations has already been given. Parcels must not exceed 7lb. in weight; they must be prepaid, the rate being 3d. for 1lb., 6d. for 3lb., 9d. for 5lb., and 1s. for 7lb.; they should not be posted on Sundays, Christmas-day, or Good Friday; and extra charge will be made for parcels "left till called for." No immoral work or explosive substance will be conveyed, and each parcel can only contain goods for the person to whom it is addressed, and not for re-delivery to other persons. The Postmaster General states that he is not responsible for loss or damage.

* * * *

The Cork Exhibition has been opened under favourable auspices, and promises to be a success. Mr. Parnell, speaking on the venture, said the population of Ireland was less per square mile than any other country in Europe. Why was it? The manufacturing, the industrial, and the agricultural condition of the country was not all they could wish. There were some causes which it would not be proper for him to enter into in that mixed assembly, but there were other causes to which he might refer, since they belonged to the history of the past. Mr. Parnell then referred to the extinction of woollen manufactures by the English laws a century ago, and pointed it out as one of the causes of the present condition of the country. Mr. Parnell abstained from all political allusions, but urged strongly the encouragement of Irish manufactures, pointing to the Cork Industrial Exhibition as a hopeful indication of reviving industries.

NOTICE TO ADVERTISERS.

Advertisements will be inserted at the following rates; (in all cases prepaid): *Twenty words, One Shilling; Sixpence* for each additional *Twelve words* or part of *Twelve.* The address being counted as part of the Advertisement.

Displayed Advertisements according to arrangement.

Agency.

A GENTLEMEN well connected with large Carpet Manufacturers in Kidderminster desires an Agency to represent good firms for the Sale of Goods used in the Manufacture of Carpets and Rugs. Has very large warehouse room. Apply X, *Journal of Fabrics and Textile Industries* Office, 3, Gerrard Street, Halifax.

Wanted.

SITUATION desired by advertiser as SECRETARY, ASSISTANT-MANAGER, or other position of trust. Good correspondent in French and German, and accustomed to travel. Twelve years' engineering experience, and competent inspector of machinery. Well known over the north of England. Address L. R., care of John Dale and Co., 17, Bridge Street, Bradford.

Partnership.

PARTNERSHIP.—Wanted, for a first-class Woollen Manufacturing Concern in Ireland, a PARTNER, either active or otherwise, having about £5,000 at his disposal, to take the place of one retiring. Apply to Craig, Gardner, and Co., Trinity Chambers, Dublin.

To be Let or Sold.

TO be LET the BOBBIN MILL, situated near Wray, Lancaster, on the bank of the river Hindburn, together with the weir, pen-trough, sluice, water-wheel, and gearing thereto; and a good house and outbuildings. Apply J. Jowitt, Estate Office, Hornby Castle.

TO BE SOLD by private contract, as a going concern, all those valuable COTTON MILL and PREMISES, known as Busk Old Mill, situate at Busk, in Chadderton, near Oldham, in the county of Lancaster, with the Reservoirs. Steam Engines, Boiler, Mill Gearing, Steam and Water Piping thereto belonging. together with the Machinery contained therein; consisting of 15 Double Carding Engines, and the necessary preparation to follow; the whole to be sold subject to a mortgage. For further particulars, or order to view, apply to Mr. John H. Noble, auctioneer and valuer, 21, Union Street, Oldham.

TO BE SOLD, the WOOLLEN MILL, Gnat Hole, Glossop, containing Two Sets Cards and Finishing Machinery, One Set Worsted Machinery, adapted for Knitting Yarns; also Knitting Machines; excellent water for Scouring and Bleaching purposes. For particulars apply Gnat Hole Mill, Glossop.

TO FELLMONGERS, &c.—TO BE SOLD, the FELLMONGER'S PREMISES in Jackson's Court, Layerthorpe, York, adjoining the navigable river Foss, containing an area of 1,036 square yards. The buildings are of modern erection, grouped round an enclosed yard, and specially planned for the business of a Fellmonger. The property is very compact, in first-rate order, and conveniently situated, being within five minutes' walk of the Foss Islands Railway Station, fifteen minutes' walk from the City Station, close to the Gasworks, from which Coke is to be had; and adjoining the Foss, from which water can be obtained. For price and particulars apply to G. M. Thompson, 10, New Street, York.

THE GAZETTE.

Adjudication of Bankruptcy.

Byrom J. W., Dalton, Huddersfield, Yorkshire, yarn spinner.

Liquidations by Arrangement or Composition.

Taylor W. H., 5A, Bridgewater Square, London, costume manufacturer.
Newsome J., jun., Dewsbury, Yorkshire, woollen manufacturer, &c.
Winser F., 171, Great Dover Street, Borough, Surrey, dyer, &c.
Glover C. S., 1, Herat Street, Hackney Road, trimming manufacturer.
Shackleton W. H., 71, Lever Street, Manchester, underclothing manufacturer.
Burrell T. J., 14, Knightrider Street, London, mantle manufacturer.
Chappell Abraham, 129, Sheffield Road, Barnsley, Yorkshire, fent dealer.
Wells A. R., and J. H. Kennett, 4 and 5, Honey Lane Market, London, merchants and commission agents.
Rudyard W. H., 3, Clegg Street, Macclesfield, trimming manufacturer.
Thomas W. O., Foster Lane, London, frilling manufacturer.
Dodson H. P., Old Hall Street, Liverpool, cotton merchant.
Rogge A. E. S., Old Hall Street, Liverpool, cotton merchant.
Crabtree J., Todmorden, cotton manufacturer.

Sequestration.

Walker R., Tillicoultry, woollen manufacturer.

Dividends.

Gilman J., Ball Haye Green, Leek. Staffordshire, silk manufacturer; first and final dividend of 5s. 8d. in the pound, at the offices of Mr. T. Wardle, St. Edward Street.
Collie A., and W. Collie, 17, Leadenhall Street, London; a fourth dividend of 1½d. in the pound, at the offices of J. Young, trustee, 41, Coleman Street, London.

Dissolutions of Partnership.

Brown C. M., and B. P. Hepworth Leeds, woollen manufacturers.
Sutcliffe W. and T. W., Eastwood, Yorkshire, cotton manufacturers.
Wade J., W. Wade, and G. G. Playfair, Wakefield and Leeds, cloth manufacturers and merchants.
Wylde J. L., J. Hustler, and H. Blaxland, Leeds, woollen manufacturers.
Middleton R., T. S. C. Chiswell, and R. Jones, Manchester, velvet and velveteen manufacturers and merchants.
Meloy R. J., and S. Beetles, Mill Lane, Reading, Berkshire, boot manufacturers.
Truman A., and W. Ashby, Nottingham, lace manufacturers.
Woodruff E., and J. Thompson, Greaves Factory, Nottingham, hosiery manufacturers.
Bainbridge W., E. Fox, and R. Ironmonger, Orchard's Factory, Long Eaton, Derbyshire, lace manufacturers.
Findlay J., and W. F. Millmaker, 7, Watling Street, London, warehousemen and commission merchants.
Porteous D., and W. H. Thyer, 53, Brown Street, Manchester, grey cloth agents.
Heywood S, W. Todd, jun., and J. Fenten, Cobden Mills, Heywood, Lancashire, cotton spinners.
Bunting A. J., and H. Curl, St. Stephens, Norwich, linen and woollen drapers and general warehousemen.
Cranston S. B., and W. H. Bankier, Mitchell Street, Glasgow, warehousemen.
Felton G. M., and J. Burgoyne, 6, 7, and 8, Well, Street, London, shirt and collar manufacturers.
Baybut, Madeley and Co., China Lane, Manchester, fustian merchants.
Gaskell J. and Sons, Liverpool, cotton brokers.

Bills of Sale.

	£	s.	d.	
Cook R. R., East Parade Mills, Huddersfield, cotton doubler	300	0	0	
Graham T., 31, Buxton Road, Stratford, silk agent	30	0	0	
Rudyard W. H., 3, Glegg Street, Macclesfield, trimming manufacturer.	150	0	0	
Lewis Henry, 43, Wentworth Street, Liverpool, cotton porter	36	0	0	
McNaughton J., and G. Anderson, 27, St. Ann's Well Road, Nottingham, tailors	200	0	0	
Briscoe J., 23, Milton Street, Hulme, smallware manufacturer	221	14	3	
Brown T., 132, Sandringham Road, Dalston, mantle maker	50	0	0	
Crossley W. Ward, Mulberry Street, Glodwick, Oldham, weaver	40	0	0	
Proctor G., 2, Westwood Park, Forest Hill, woollen warehouseman	set. tr. fr. wf.			
Ray W. H., 102, High Street, Winchester, linen draper and silk mercer	1880	0	0	
Ray W. H., and E. Hoare, 102, High Street, Winchester, linen drapers and silk mercers	295	0	0	&c.
Horne H., H. R. Horne and J. W. Flight, Ramsbottom, Lancashire, cotton spinners	fur. chrg.			
Lawton S., and others, Middleton Lancashire, silk finisher	mortgage &c.			

PATENTS.

Specially compiled for "THE JOURNAL OF FABRICS AND TEXTILE INDUSTRIES" by G. G. M. HARDINGHAM, C.E., Fellow of the Institute of Patent Agents, 191, Fleet Street, London, E.C.

Applications for Letters Patent.

Bleaching, &c., woven fabrics. J. Farmer, Salford, and A. Lalance, Mulhouse	8th June 2871
Bleaching kiers. C. Jackson and J. Westley, Bolton	14th June 2958
Bobbin net and twist lace machines. A. C. Henderson (L. R. Defeutrelle, Strasbourg)	14th June 2961

Bobbin net and twist lace machines. A. C. Henderson (J. A. Lateux, Paris) 28th June 3208
Carding Engines. A. M. Clark (H. Woodman, Sace, Maine, U.S.A.) 29th May 2672
Creel pegs. P. Coonan, Blackburn 30th May 2679
Combing machinery. E. de Pass (J. Imbs, Paris) 4th June 2761
Dyeing silks, &c. T. Holliday, Huddersfield 29th May 2668
Dyeing textile fabrics. H. H. Lake (La Société Anoyme des Seintures et Apprets de Tarare, France) 11th June 2906
Dobbies or jacquards for weaving. J. Garstang, A. Harling and A. Harling, all of Burnley 12th June 2915
Felt Carpets. J. Barcroft, Waterfoot 7th June 2846
Fancy weaving. W. H. Tristram, Bolton 21st June 3076
Jacquard apparatus. J. A. and T. Crossley, Failsworth 6th June 2807
Looms. H. J. Haddan (J. Macfarlane, New Hampshire, U.S.A.) 6th June 2814
Looms. W. Irving and F. Howarth, Liversedge 8th June 2860
Looms. M. Sowden, Bradford 8th June 2861
Looms. R. and R. S. Collinge, Oldham 13th June 2935
Looms. W. H. Kenyon, Huddersfield 14th June 2960
Looms. J. Almond, Blackburn 19th June 3040
Looms. W. H. Tristram and H. Brereton, Hallewell 21st June 3075
Looms. W. Smith, Heywood, and T. Wrigley, Bury 27th June 3194
Measurement and delivery of ribbons, &c., from reels. E. Jones, London 15th June 2987
Mixed textile or knitted fabrics. D. C. Miller, Larkhall, N.B. 26th June 3153
Plaiting machines. T. and R. T. Foot, London 4th June 2764
Process for preparing water-tight fabrics. E. A. Brydges (F. O. Spielhagan, Berlin) 19th June 3033
Pile fabrics, manufacture of. D. Marcon, Paris 27th June 3188
Ring spinning frames. W. Emmot, Salford 29th May 2658
Ring spinning machines. J. Wetter (H Dobt, Belgium) 23rd June 3130
Rag grinding machinery. C Wilson and E. Scargill, Batley 28th June 3216
Stretching woven fabrics. J. Strang, Ramsbotton 29th May 2652
Spinning spindles. A. M. Clark, London 6th June 2823
Spinning, doubling, and twisting. J. H. Clapham and T. R. Whitehead, Bradford 9th June 2884
Scutching machinery. W. R. Lake (T. Burrows, Paris) 12th June 2931
Spinning machinery. F. Heslop, Leeds 13th June 2942
Stop motions of drawing frames. J. Macqueen, Bury 23rd June 3118
Treating rags and fabrics. T. Illingworth, Batley 5th June 2796
Weighting apparatus for Looms. A. Wallwork, Ashton-under-Lyne 6th June 2806
Warping machines. W. Marshall, Ravensthorpe 28th June 3215
Washing wool. H. J. Haddan (E. Tremsal, Belgium) 15th June 2983
Yarns used in production of fabrics. W. R. Lake (J. T. Waring, New York) 26th June 3172

Grants of Provisional Protection for Six Months.

2173	2196	2201	2212	2225	2226	2232	2233
2246	2254	2293	2317	2319	2356	2367	2379
2383	2403	2411	2415	2426	2342	2432	2441
2450	2457	2468	2477	2484	2486	2490	2496
2510	2530	3541	2554	2564	2565	2597	2603
2604	2607	2619	2629	2632	2634	2641	2649
2652	2658	2668	2672	2679	2692	2761	2762
2764	2796	2806	2807	2814	2823	2846	2860
2861	2871	2875	2884	2906	2909	2915	2931

(All of 1883.)

Notices to Proceed.

(Notice of opposition to the Sealing of a Patent must be given within Twenty-one days of the Notice to Proceed being advertised in the Commissioners of Patents' Journal.)

Combing machines. J. Holden and J. Burnley, Bradford 9th Feb. 711
Cleaning wool. J. C. Walker, Shipley 21th Feb. 955
Damping fabrics (apparatus for). J. B. Jackson and G. Bentley 24th Feb. 1018
Felting wool. A. Monchablou, Paris 9th Feb. 721
Holders for ribbon, &c. A. M. Clark (J. Milette, Wenance, U.S.A.) 27th Feb. 1067
Jacquard apparatus. W. Davenport and W. Crossley, Failsworth 18th May 2484
Knitting machines. W. Morgan-Brown, London 21st Feb. 950
Looms. T. Lonsdale, Blackburn 29th Jan. 476
Looms. J. Schofield, Littleborough 1st Feb. 606
Looms. J. Williams and H. Barnes, Burnley 19th Feb. 906
Ring and traveller spinning and twisting frames. A. M. Clark (J. J. Bourcart, Zurich) 16th Mar. 1413
Ring spinning frames. A. M. Clark (J. Bourcart, Zurich) 24th Mar. 1540
Spinning machinery. J. T. Nelson, Leeds 6th Feb. 653
Spinning and doubling. C. G. Bracewell and A. Pilkinton, Barnoldswick 12th Feb. 774
Spools and dobbies. F. Wirth (A. Abegg, Laufeuburg) 2nd Mar. 1133
Shuttles. J. Brownlee, Glasgow 12th Mar. 1257
Self-acting readers for jacquard looms. R. W. Sutliffe, London 9th May 2356
Warping machines. W. McGee, Paisley 24th Feb. 1006
Winding and doubling machines. J. Boyd, Shettleston, Lanark 26th May 2619

Patents Sealed.

26	43	53	92	192	327	427	432
580	817	1527	1573	1740	1867	1931	1945
2297	(All of 1883).		5839	5893	5904	5958	5964
5973	5974	6037	6044	6061	6082	6135	6203
6223	6224	(All of 1882).					

Patents on which the Stamp Duty of £50 has been paid.

James Henry Brierley, London, "Improvements in looms for weaving." 1st June, 1880 2230
William Bywater, Leeds, "Improvements in apparatus for the manufacture of felt." 2nd June, 1880 2247
William Bywater, Leeds. "Improvements in apparatus employed in preparing, sizing, dyeing, and warping woollen, worsted, and other yarns." 2nd June, 1880 2248
Samuel Love and John W. Lamb, of Nottingham, "Improvements in knitting machinery." 23rd June, 1880 2552
James, John, and Thomas Mellodew, John Lees, and John Hardy, all of Oldham, "Improvements in weaving and manufacturing fast pile fabrics." 7th June, 1880 2292
Charles Denton Abel, London, "An improved manufacture of textile fabrics." (A communication.) 12th July, 1880 2876
Alfred Hitchon, of Barrowford, "An improved apparatus for pressing or levelling yarn on beams for weaving purposes." 29th June, 1880 2661
David Hunter Brandon, Paris, "Improvements in apparatus for cleaning and combing wool." (A communication.) 6th July, 1880 2774

Patents on which the Stamp Duty of £100 has been paid

John Leeming, Bradford, "Improvements in looms for weaving." 6th June, 1876 2366
Richard L. Hattersley and James Hill, "Improvements in, or applicable to, looms for weaving." 10th June, 1876 2408

Copyright of Designs.

(Registered during June, 1883).

Class VI., Carpets.

399,069 S. B. Palmer, and Co., Kidderminster.
399,164-65 James Humphries and Sons, Kidderminster

Class XI., Furnitures.

398,507 R. Dalglish, Falconer & Co., Manchester.
398,520 B. Duckworth and Sons, Manchester.
398,586 D. Lee and Co., Manchester.
398,587 Boden, Terras and Co., Manchester.
398,607 Thomas Hoyle and Sons, Limited, Manchester.
398,616 Beith, Stevenson and Co., Manchester.
398,783 D. Lee and Company, Manchester.
398,867-72 The Whalley Bridge Printing Company, Manchester.
398,882 Boden, Terras and Co., Manchester.
398,906-08 Mackintosh, Dudgeon and Co., China.
398,916-17 Susmann, Simon and Co., Manchester.
399,181-82 Susmann, Simon and Co., Manchester.
399,360-62 D. Lee and Co., Manchester.
399,447 B. Duckworth and Sons, Manchester.
399,448 49 R. Dalglish, Falconer and Co., Manchester.
399,517-24 E. Potter and Co , Manchester.
399,525-26 Thomas Hoyle and Sons, Limited, Manchester.
399,538-39 R. Dalglish, Falconer and Co., Manchester.
399,667 Edmund Potter and Co., Manchester.
399,668-70 D. Lee and Co., Manchester.
399,813 Thomas Hoyle and Sons, Manchester,
399,965 Thomas Hoyle and Sons, Manchester.
399,932 D. Lee and Co., Manchester.

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Contents.

Notices.

The Half-Yearly Subscription—payable in advance—including home postage, is 3s. 6d. Cheques and Post Office-Orders to be made payable to H. & R. T. Lord, 3, Gerrard Street.

The Publishers will be happy to receive intimations of New Inventions, Patents, &c.

The Publishers are open to receive from Designers, Original Designs of Carpets, Damasks, Tapestries, Linen, Cretonnes, &c., and such as are accepted will be published with the Designers name affixed. All Designs sent for approval must be 10 inches long by 7 inches wide for single page, and for double page, 16 inches by 10 inches, and must be accompanied by Postage Stamps sufficient to pay return Postage in case they are rejected.

Literary communications must, in all cases, be accompanied by the names and addresses of the writers, not necessarily for publication, but as evidence of authenticity.

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Readers are invited to forward items of interest to the Trades concerned.

The Proprietors will feel greatly obliged if any of their readers in making enquiries of, or opening accounts with Advertisers in this paper, will kindly mention the *Journal of Fabrics and Textile Industries* as the source from whence they obtained their information.

The New Patent Bill.

THE announcement made by Mr. Chamberlain in Parliament a few days ago, referring to the new Patent Bill, that, in consequence of the cost of issue, the specifications of patents will cease to be printed, has not only surprised but greatly disappointed all those interested in inventions, and a petition has been presented, bearing the signatures of a number of influential engineers and inventors, drawing the attention of the Government to the fact that the printing and keeping all specifications on sale, has been one of the most useful improvements introduced under the Patent Law Amendment Act of 1852, and that it has had the effect of spreading a knowledge of inventions in a most beneficial manner, and at a cheap rate. The great importance of the publication of the blue books issued by the Patent Commissioners is proved by the demand for them. The first edition consists of 200 copies, fifty or sixty of which are sent free to public libraries and other institutions, the remaining 150 are often disposed of in a very short time, whilst in some cases there are as many as seven editions printed. The authorities propose to issue illustrated abstracts, instead of full specifications, but, though they would be welcome to the ordinary reader, yet, they would be perfectly inadequate for legal cases, for deciding what constitutes a violation of a former patent, or for forming an opinion as to the scope of a new claim. If every patent was based upon an entirely new principle, it would not be difficult to describe the distinguishing feature of each, but in many cases the points of similarity are so many, and those of difference so small, that it requires the keenest judgment to decide whether the improvement on the former is sufficient to warrant the granting of a patent. Hitherto the difficulty that an inventor has had to contend against, has been determining, by perusing the full specifications, whether his invention was genuine or not, but should the new "bill" come into force, his work will be greatly increased. The abridgements will not enter into minute details of an invention, and therefore he must journey to London or engage an agent to visit the Patent Office library and study or copy the manuscript specification. Again in the trial of a patent case, it is often necessary to refer to a great number of previous specifications, copies of which must be in the hands of judge, counsel, &c.; all of these must in future either be written out, or printed at the expense of those engaged in the suit. If, as Mr. Chamberlain states, receipts from the sale of the blue books does not cover the cost,—why not increase the price of the specification. It is bought only by those who actually need it, and therefore there is no reason why it should be sold below the cost of production. Then, if necessary, the fees might be increased, for to give facilities for taking out patents at Post Offices, and then to cause inventors to waste days, or perhaps weeks in London, before he can satisfy himself that his invention is not an infringement, is simply ridiculous. Many men will be unwilling, others unable, to incur the loss of time and money, and therefore will take out patents regardless of their validity, and their value will so decrease that no capitalist will be found willing to purchase them. In addition to the disappointment expressed, owing to Mr. Chamberlain's announcement, much dissatisfaction has been expressed in different parts of the country, because the copyright of designs and the trades' marks portions of the bill have not received the full consideration, which it is thought by many experienced tradesmen, they ought to have received. The President of the Manchester Chamber of Commerce, who has taken a lively interest in the question, and who has had interviews (along with various members of Parliament) with Mr. Chamberlain regarding the question, referring at the last meeting of the above body to the Patents' Bill, said that they had not been very successful with some portions of the bill, and he wished the copyright of designs and the trade marks, portions had been amended in several particulars. The Directors of the Chamber thought that inasmuch as it had been considered worth while to establish an office in Manchester for cotton marks, it might have been considered also desirable to give that office full powers to deal with the passing of the marks, as, in the case of Sheffield, with marks for Sheffield goods. In Sheffield the marks were first submitted to the office in that town, and having been carefully examined, they were sent up for formal registration to London. In the case of cotton trade marks, when a merchant or manufacturer applied for the registration of a mark, he had to send it to London, and after the lapse of some time, the mark was sent down to Manchester. Search was made here for similar marks, and the mark was again sent to London with the numbers of the marks which were supposed to clash with it, and it was there finally adjudicated upon and passed. It seemed to them it would be a very much more simple and natural course of procedure, that this being the centre of the cotton industry, the marks should in the first place be sent into Manchester and there passed, and simply sent formally to London to be registered. If that were done they thought that some of the grievances of which merchants and others had had to complain as to the passing of marks so nearly similar to their marks, which were of great value to them, and so doing them a substantial injustice, would be removed. Very strong representations on that head had been made to the Chamber by the most influential firms in Manchester, and as they would have seen by the report of their proceedings on the previous day they had sent a memorial to the

Chamber dealing with those points, which the Directors were prepared to support. Whilst in London a fortnight ago, he had an interview with Mr. Chamberlain, in company with Mr. Armitage, M.P., and Mr. Grafton, M.P., and they discussed several of these points, for instance, the publication of registered designs, the question of the stamping of marks upon piece goods and so on, but he confessed that they did not make very much way. Their difficulty arose principally from this, that the Board of Trade failed to discern the differences between textile fabrics and articles such as agricultural implements, candelabra, chandeliers, and such articles which were made of iron, wood, stone, or glass. They thought the way of dealing with the question would be that they should divide all goods into two classes; one of which should consist of textile fabrics, and which would comprise cottons, linens, yarns, silks, and other fabrics; and a second class, which would be articles which were not comprised under the head of textiles, and which they thought would cover almost everything. We understand that further representations are to be made to the Board of Trade, and it is to be hoped that they will meet with success, as the bill will undoubtedly be greatly improved, if some of the anomalies and difficulties existing can be removed before the bill becomes law.

The Manufacture of Velvets.

DURING the past few weeks indications have not been wanting which show that the taste for velvets of various kinds is greatly on the increase, and no doubt within a short time piece and ribbon goods will become the rage, as was the case some fifteen years ago, when, says *The Warehouseman*, in one or two London houses the ribbon velvet departments did as much business as all the other departments combined. The above paper further remarks that the manufacturers at Crefeld, Zurich, and Lyons are overdone with orders, and the revival of the industry in so sudden a manner has, according to a prevailing idea, paralysed the output. Such is, however, not the true state of the case, the real reason of the delay in executing orders being of so novel a character that it deserves more than a passing mention. Ever since the peace of 1864, which ended the civil war in the United States, money has circulated more freely on the American Continent, with the result that general habits of luxury have been engendered, which before the struggle of the South were confined to a few of the comparatively rich landowners and well-to-do commercial families. It scarcely matters what the latest fashion in Paris may be, one is almost sure to find the self-same style in vogue in New York before the season is far advanced. The consequence of nearly fifty millions of people having to be supplied with material from the stores of the old world would necessarily react upon European populations when stocks are limited, and it is no exaggeration to state that we are just now suffering from a crisis of this kind. The fashion books of Paris two months ago conclusively showed that velvet ribbon and piece velvet for dresses would be in vogue for early autumn wear, and it is needless to point out that a material so well adapted for the winter would command a market right up to the late spring of 1884. English drapers foreseeing this, have, in numerous instances, placed their orders early, and have in some cases been fortunate enough to get them executed, but there have been large numbers of orders given to the travellers of London and Manchester houses during the past six weeks for velvets in fashionable shades which will be delayed for several months, and the reason is that American dry goodsmen have anticipated the French market, so that our wholesale buyers are everywhere met by procastination and promises, with, in many cases, little hope of having those promises redeemed. To give only one illustration, which came immediately under our notice a few days since. A young man in one of the most influential houses in the City was looking over the piece velvet order book, and closing it with a sigh, was asked by a traveller who stood near the cause of his manifestation of trouble. "Why," said the young fellow, "there are no fewer than six hundred pieces of stuff ordered this morning on travellers' sheets, which will stand no earthly chance of being 'filled' before Christmas at the rate we are going on." This is the desparing cry of many firms, who know that much of the money daily disbursed in travelling expenses is absolutely wasted, since at least half the orders taken just now for the only commodity in drapery that may be said to be in good demand will most probably be cancelled before the fogs of November are upon us. The natural sequel to such a condition of things is to inquire if there be no remedy to cure, or at least mitigate, the evil. On the face of it there would seem absolutely none. The American is willing to pay a price for prior accommodation, which an English buyer dare not offer; and the French and Swiss take advantage of the pressing necessity of England to put us off indefinitely, while orders which have possibly only arrived by the last New York mail are put forward to be executed before ours are considered. * * * It is within our knowledge that orders have been given to French manufacturers "in the grey" four months before dyeing instructions have been sent, and the English buyer's life has been embittered with the unaccountable delay caused by American orders, which have been given undue preference simply because prices have advanced in the meantime, and the French manufacturer is shrewd enough to know that the Englishman has made his contract, has sold the goods to the retail draper, and must preforce bide the Frenchman's own good time. It has come to be almost a modern French proverb that an American will pay any price so long as he gets what he wants, and, acting upon this axiom, the French manufacturer asks a figure which is generally quite 7½ to 10 per cent. more than the maximun price the Englishman will be likely to give, with the result that English provincial drapers especially will be greviously disappointed over their autumn velvet trade.

The only possible way of combating this unfairness would be to become our own manufacturers, and some of the excellent shades in cotton-backed velvets thrown off by various of the best Yorkshire looms during the past few years almost give colour to the doctrine that time and patience will enable us to compete on favourable terms with the finest makes of the Continent; but, alas! many people who pose at public commercial meetings and give vent to these theories know little of their subject. They entirely neglect to take climatic influences into consideration as a factor. The water of the Rhone and several of its tributaries is an important constituent of dyeing success, as it possesses properties that our Ouse and Humber lack. There was a hidden merit in the Jordan which the rivers of Damascus could not boast; and it appears likely that, unless the process suggested by Mr. Goldthorp, given in another part of our columns, or some similar plan should prove effective, we shall continue to be dependent on France for our velvet stocks to the end of the chapter.

Printed Bandanna Cloth.

It may be remembered, writes a contemporary, that, a good many years ago, there used to be a kind of spun silk and cotton mixed shawl that was printed upon, in chintz fashion, when shawls were worn, in the same way that now obtains with printed satteens. They were considered much to showy for general use, save here and there, where one or two would be taken for the rural districts, and were chiefly sold in the shipping trade, and while we write we cannot avoid surmising that some such article now would stand a much better chance of selling in a different form to that of a shawl than at the time we speak of, as well as the spun silk bandanna cloth treated in the same way, now that these bright and gay effects are appreciated. The bandanna cloth would be suitable for dresses, though the same objection would be attached to it that there has always been—namely, its liability to split, as when in the shape of gentleman's pocket handkerchiefs. Yet still, in the form of a polonaise, and for other uses, such a fancy fabric might often be applied to take the place of silk, and be used to advantage, while its lowness of price would encourage its extended sale; and in the present revival of old styles such a class of fabric would be quite consonant and *à propos* to the fashion of the day.

Wool Industry in Russia.

Of all industries, wool manufacturing is, without doubt, the most developed in Russia. This is due to the enormous amount of wool which the Russian clip yields, and the severity of the climate. Russia has at all times possessed large flocks of sheep, but latterly much has been done to increase them, particularly merinos. Fine wool sheep breeding is carried on to a notable extent in southern Russia; there the most improved methods of machine scouring exist, so that that part of the Empire turns out wools much better cleaned than formerly. There are at present no fewer than forty such establishments in Russia, employing 7,000 operatives, and turning out annually 13,000,000 roubles worth of wool. As for wool manufacturing, each factory turning out tissues, embraces pretty much all branches connected with it, but, nevertheless, the spinning of wool has gradually attained great importance in Russia as an independent branch, and has, moreover, fostered domestic wool working. Aside therefrom, a good many sheep-breeding farmers spin their wool, and either sell the yarn or have it worked on the spot. The number of weaving establishments for pure as well as cotton-mixed woollens in Russia is very large; great progress has lately been made there in turning out light tissues for women's wear, and these goods compete direct in Eastern markets with English. Cloth manufacture is in a most prosperous condition in Russia. A most important portion thereof is military cloth, on account of the great size of the army; the middle classes have worn, for a long time past, a stout, rather coarse cloth, and there is besides, the export trade to China and Japan. Most factories make every species of cloth, and turn out the very finest from the raw wool they buy Thus the Thornton Cloth Factory at St. Petersburg manufactures 72 different qualities of cloth after the latest English patterns, and has 800 looms in operation. Most of the wool manufacturing machinery is imported; only a limited number of machines hail from Bialystock, Grodno, and Poland. The most important machines come from England, nearly all the mechanical looms from Saxony, while pulling and all-velvet manufacturing machines are ordered from Aix-la-Chapelle and Verviers. Besides coal, wood is used as a fuel in Russian factories, for Russian coal is only cheap near the mines. As for credit, Russian manufacturers usually take six months' acceptances, but always so arrange that they fall due before, and not after, the Nidjni-Novgorod fair. While this great fair is held, the Russian bankers negotiate all these acceptances with the utmost regularity. The discount is seldom less than 7 per cent; small acceptances have often to submit to a 10 to 12 per cent. discount. It is not likely, however, that these exorbitant rates of interest will prevail much longer in Russia, for banks now multiply in all directions in the Empire. While, on the one hand, the cost of manufacturing is greater in Russia than anywhere else, this is also the case with the steady current profit realized by the manufacturer, who clears between 15 and 20 per cent. more profit than the manufacturer outside of Russia does. Then there is the protective duty, which is so high that, with a comparatively moderate import to contend with, the Russian woollen manufacturer is always sure to get rid of his goods. The following cloths are those of most current sale:--military cloth, summer tricots, winter tricots, summer paletots, and winter paletots. Some manufacturers have attempted making coarse cloths, but without any profitable result. The Moscow exhibition of last summer has shown what their manufacturers can accomplish, their exhibits being highly creditable. Hence, all that Russia imports is the very finest and newest, in which there is no Russian fashion, for the wearers of such fine goods dress like anybody in London, Paris, or Berlin, after the latest fashion there introduced. Even the lower classes in the cities have begun to wear cloth, giving preference to dark colours in blue and green, while the women fancy turkey red, and without this somewhere on their body they would not consider themselves well dressed. This the Moscow manufacturers never lose sight of, and get up the most extravagant Oriental mixture of colours for female wear.

Stagnation in the Woollen Manufactures in New England.

From 250 requested replies to questions, received from the proprietors of woollen mills in New England, it is ascertained that 759 sets of cards are stopped, equal to the consumption of 300 pounds of wool each, daily, in the aggregate 230,700 pounds per day. Probably these returns, which indicate a stoppage of more than one-third of the sets of cards in New England, are incomplete, and do not show the full extent of the reduction, as no answers have been received to a number of letters of inquiry.

A New Apparatus for Shearing Piled Fabrics.

Woollen and other textile fabrics, in their manufacture, are subjected to many operations, amongst which is the shearing of those which have a pile on the surface; the object being to cut to a uniform length the fibres or filaments which have been raised on the fabric. This operation is of the utmost importance in the manufacture of many textiles, especially in that of velvets, but more particularly in those made according to the well-known "Montagnac" process. Up to the present time the machines employed for this operation, called longitudinal or transverse shearing machines, have been arranged, mostly, to effect a perfectly regular or uniform shearing. In the transverse shearing machines the speed of travel of the fabric on the table between the cutter cylinder and the fixed blade, and the velocity of the cutter cylinder, are so calculated that no part of the surface of the fabric can pass without being acted upon over its entire width, except the selvages. Sometimes perforated plates have been interposed between the fabric and the shearing blades, but this can only produce continuous longitudinal streaks on the surface. An improved apparatus has recently been patented for shearing piled fabrics in such a manner as to produce designs on the surface. The invention consists in so applying perforated plates, and combining their movements with that of the fabric, as to produce novel ornamental effects in the following various ways. By giving the fabric, as it travels onwards, subject to the shearing action, a to-and-fro movement transversely, whilst a perforated plate remains stationary interposed between the fabric and the cutters, the surface of the material is made to present zig-zag, or undulating streaks. The reciprocating motion of the fabric for this purpose is most conveniently produced by mounting in slides the table over which the fabric passes, and causing it to reciprocate by means of a revolving crank, eccentric, or cam, driven by gearing from the shearing cylinder. Again, by giving the perforated plate a continuous transverse movement to the one hand, a series of diagonal streaks inclined one way can be produced, and by a succeeding operation a series of streaks inclined the other way can be produced, and the two sets of diagonal streaks crossing each other as a chequered pattern. The perforated plate, which is a thin flexible strip, is for this purpose attached to an endless chain moved by gearing from the shearing mechanism. The transverse motion of the fabric, or of the perforated plate, instead of being continuous may be intermittent, and thus patterns are produced showing separate spots on the fabric. Finally the fabric and the perforated plate may both be moved transversely either with reciprocating, continuous, or intermittent motions, and thus a variety of effects can be produced, which may be further varied by altering the velocity of the shearing cylinder relatively to that of the table or of the perforated plate.

Embroidery Designs.

In order to transfer a design on the tissue which has to be embroidered, Schmidt Brothers, of Munich, Germany (Germany patent), print the design with a mixture of printers' inks and glycerine and wax on a sheet of paper, which has been folded, a solution of stearine and wax being applied between the folds. The paper is then placed over the stuff upon which the design has to be transferred, and is pressed over it by means of a smoothing bone.

Commercial Failures.

According to *Kemp's Mercantile Gazette*, the number of failures in England and Wales, gazetted during the four weeks ending Saturday, July 28th, was 767. The number in the corresponding four weeks of last year was 833, showing a decrease of 66, being a net decrease, in 1883, to date, of 182.

The failures were distributed amongst the following trades; and for comparison, we give the number in each, in the corresponding weeks in 1881 and 1882 :—

	1883	1882	1881
Building Trades	77	81	113
Chemists and Druggists	5	8	10
Coal and Mining Trades	14	16	15
Corn and Cattle	18	21	21
Drapery Trades	64	49	67
Earthenware Trades	8	9	6
Farmers	32	29	40
Furniture and Upholstery Trades	16	21	16
Grocery and Provision Trades	147	171	152
Hardware and Metal Trades	25	25	16
Iron and Steel Trades	26	21	18
Jewellery and Fancy Trades	36	37	16
Leather and Coach Trades	48	56	31
Merchants, Brokers, and Agents	83	102	74
Printing and Stationery Trades	16	26	20
Wine, Spirit, and Beer Trades	84	86	77
Miscellaneous	68	75	136
Totals for England and Wales—	767	833	828
Scotland	80	68	66
Ireland	19	11	17
Totals for United Kingdom—	866	912	911

The number of bills of sale published in England and Wales for the four weeks ending Saturday, July 28th, was 982. The number in the corresponding four weeks of last year was 3,566, showing a decrease of 2,584, being a net decrease, in 1883, to date, of 21,389.

The number published in Ireland for the same four weeks was 129. The number in the corresponding four weeks of last year was 116, showing an increase of 19, being a net increase in 1883, to date, of 198.

American Cotton Exports.

The American exports of cotton goods do not seem to be expanding, judging by the latest statistics to hand; on the contrary, they appear to have remained about stationary during the past four years, and during the current year the tendency seems rather in the direction of contraction than increase. The following table gives the declared value and number of packages of the exports of this class from the port of New York from January 1st to June 16th this year, and during the corresponding period in each year since 1870 :—

Year.	Value.	Packages.
1883	$4,140,168	63,403
1882	4,282,203	69,989
1881	4,574,632	66,331
1880	3,181,336	43,174
1879	3,942,829	63,400
1878	3,288,720	53,801
1877	3,234,792	46,450
1876	2,833,631	82,508
1875	952,952	12,950
1874	804,004	10,456
1873	723,236	8,329
1872	555,108	5,015
1871	773,943	10,942

These exports appear still to go chiefly to Liverpool (no doubt to a large extent for re-export) and to China, the shipments to the Central and South American States, the West Indies, Canada, and Australasia being remarkably small in comparison. Thus, during the week ending June 16th, out of a total of 2,636 packages exported, 1,067 were shipped to Liverpool, 147 to London, and 495 to China. The shipments to the whole of the Central and South American States were only 755 packages, leaving only 172 packages to all other parts of the world.

The Oldham Fine Art and Industrial Exhibition.

The large and important town of Oldham, not to be behindhand, inaugurated a Fine Art and Industrial Exhibition on the 1st inst. The Exhibition, which was opened by Sir John Lubbock, is an extensive one. The exhibits are large in number, and very varied. There is an especially good show of cotton spinning, weaving, and other machinery; all the principal makers of this class of work being well represented. The display of fabrics of various kind is very rich, and reflects great credit on the firms who have produced them. We hope to give particulars of the exhibits in a later issue.

The New Spanish Tariff.

The following are amongst the list of import duties, under the new Spanish tariff, which came into operation on the 1st inst. :—

		£	s.	d.
Cocoa-nut, palm, and other firm oils	cwt.	0	0	5
Other vegegable oils, except olive oil	,,	0	9	5
Dyewood and tannery bark	,,	0	0	1½
Indigo and cochineal	,,	0	4	0
Dyeing extracts	,,	0	1	2½
Colours derived from coal tar, &c.	kilo.	0	0	10
Muriatic and hydrochloric acid	cwt.	0	0	5
Nitric acid	,,	0	1	7½
Sulphuric acid	,,	0	0	7½
Alkaline carbonates and ammoniacal salts	,,	0	0	5
Chloride of lime	,,	0	0	6
Raw cotton	,,	0	0	6
Hemp, raw and hackled	,,	0	0	9½
Flax, ditto	,,	0	0	9½
Jute, Manilla hemp, and other vegetable fibres	,,	0	0	1
Bristles, horse-hair, and hair	,,	0	0	5
Unwashed wool	,,	0	4	10
Washed wool	,,	0	9	7
Ditto, combed or carded, or carded waste	,,	0	13	2
Worsted, spun and twisted	,,	2	0	0
Raw and untwisted silk	,,	0	10	0
Combed or carded waste silk	,,	0	4	0
Ditto, spun, but not twisted	,,	0	4	0

Following the tariff is a list of various exemptions from and modifications of special surcharges hitherto imposed upon certain articles by virtue of successive budget laws. In accordance with article 20 of the budget law of 1878-79 abatements of 5d. per cwt. in the case of raw cotton, and 1s. 2d. per cwt. in the case of indigo, and skins and hides untanned, have been allowed upon direct imports from non-European foreign countries. In future, the abatement will be 1s. 2d. per cwt. upon indigo, 5d. per cwt. upon raw cotton, and 5d. per cwt. upon untanned skins and hides, the ordinary duty upon this latter article having already been reduced about 50 per cent. The above tariff is general, and applicable to treaty and non-treaty nations alike, except where a still lower duty has already been granted to a treaty nation. For instance, while the treaty with France remains in force, fine wools unwashed will be admitted from treaty nations at the rate of 3s. 1½d. per cwt., and washed ditto at 6s. 1d. per cwt. Alpacas, vicuna, and llama wools, which were formerly placed in section 134 among fine wools of all classes, are now included in section 131, as hair, the duty upon which is considerably lower.

Important Innovation in Machinery.

We notice in the German and Austrian technical papers that machinists have begun to substitute for the old style of large fly-wheels much smaller ones loaded with lead, without thereby losing any centrifugal power, while the expense barely exceeds that of the ordinary fly-wheel. If properly constructed, these leaded fly-wheels are preferable, for they work admirably and by reason of their great weight take a great deal less space. These new fly-wheels are either cast hollow, and the molten lead is poured into the cavities, or the lead is fastened on the wheel in segments from the outside. If the wheel is accurately cast, the lead will fill it correspondingly, and the wheel will be true on the shaft, but this correct casting of the wheel not being an easy matter, many prefer the outside fastening of the lead, by means of which the wheel can be rendered true at once. Old fly-wheels are also loaded with lead externally to increase their centrifugal force. The reform thus inaugurated is it seems, readily and rapidly adopted in Central Europe, and eventually may be elsewhere.

Giving the Appearance of Silk to Vegetable Fibres.

The following method of treating vegetable fibres, in order to give them a similar appearance to that of silk, has been used by Mr. Aubert of Lyons.

The vegetable fibre (cotton, flax, hemp, jute, etc.) is immersed for four hours in a solution of commercial caustic soda, the temperature being kept at 80° C. The gummy matters which have not been dissolved by the above treatment give to the fibre a yellow tinge, of which it can be freed by an immersion in a hand warm bath of hydro-chloric acid at 6 degrees B. It is then washed repeatedly until the wash water is perfectly neutral. The well-washed material is then treated with a solution of hypochlorite of sodium at 70 degrees B., until completely decoloured. After drying, the fibre is introduced in a warm solution of glucose or of sugar at 8 degrees B., in which it is left 4 or 5 hours, and then dried. It is then treated with a solution of nitric and sulphuric acid. The sugar with which it is impregnated is transformed into nitrosaccharose and the cellulose into binitrocellulose. After a perfect washing, they are taken into a boiling soap bath, then washed again. A solution of tannic acid, or any other substance containing tannin (sumact galls, etc.), is then prepared, the fibre being introduced a, 30 degrees C., and left in this bath for at least five hours. When taken out of the tannin bath, it is taken through a cold solution of double tartrate of antimonium or of potash (3 p. c) The fibre, which has been treated as above, can be carded either alone or together with silk or silk-waste after being in its pure state or mixed to the silk, dampened with a compound consisting of pure water, olive oil soap, glycerine, and white wax in proportions, varying with the quality of the goods and the quantity of vegetable and animal fibre in the tissue.

Microscopic Test of Printed Cottons.

The art of good dyeing consists in causing the dye, in a state of solution, thoroughly to penetrate the substance of the fibre, and there become insoluble. The nature of the fibre may exert an important influence on its receptive capacity and on the mode of precipitation. The precipitation of the colour may take place in the dyeing properly so called, or in the subsequent printing or steaming. This almost always is the case with calicos. Latterly steam colours have gradually been gaining ground, the use of artificial alizarim having contributed not a little thereto. But there are other colours, the fixing of which depends on an entirely different principle. These are called albumenized colours. The process allows for the use of dyes, which, owing to their insolubility or their neutrality in respect of cotton fibre, are unsuited for printing cotton fabrics. The colours are first mixed with a solution of albumen, printing and steaming following. The albumen coagulates, and the colours become fixed on the fibres. The union is very intimate, and if the dye is permanent itself, very well-dyed goods are the result. The process is especially employed with aniline colours and some other mineral dyes, as Guignet's green, &c.

In examining printed cottons to discover the dye used, and mode of impression, the question not unfrequently arises as to whether the colour was elaborated in the fibre, or formed first and fixed on the fibre with the help of albumen. Both methods may be used separately with the same colour. For instant, it is a frequent practice to impregnate the fibres with a solution of some salt of lead, afterwards precipitating the latter in the form of the carbonate or sulphate, so as to get an orange-red basic chromate. But if steaming is practicable it is much easier in such a case to print with orange-red and albumen and fix after by steaming. How are these methods to be distinguished?

It was at first suggested to determine the presence or absence of albumen. Its peculiar affinity for colouring matters of organic origin, which are wanting in cotton fibre, would contribute towards the desired result. But, it is found that if a material dyed with chromate of lead be placed in a bath of the kind indicated the organic matter is deposited, in greater or less quantity, all over the surfaces dyed with lead, so that the only result is a more or less pronounced dinginess of tone generally, without any approximation even to the result sought.

Mr. Richard Meyer, who has given much attention to investigations of the kind, has recently proposed to solve problems of this class with the aid of the microscope. He ravels out small shreds of the material, so that the fibres of cotton appear singly. These, under the microscope, are transparent and uniformly coloured. In some cases small granules are visible in them, but the character of the fibre remains unchanged, and can easily be recognized, as the colour is evenly distributed throughout the interior substance. On the other hand, when albumen has been employed the aspect is quite different. The fibres appear absolutely colourless. Small coloured particles of albumen are seen adhering to the exterior of the fibres here and there. The object-glass exhibits similar particles, which have been detached in the process of separating the fibres. When chromate of lead has been fixed with albumen, the small particles of albumen appear opaque and black by transmitted, but a bright red by reflected, light. Ultramarine fixed with albumen exhibits beautiful azure blocks by reflected light, but otherwise presents the same characteristics as the chromate.

Canadian Tariff.

Wool and Woollens.—Manufactures composed wholly or in part of wool, worsted, the hair of the alpaca, goat, or other like animals, viz., blankets and flannels of every description, cloths, doeskins, cassimeres, tweeds, coatings, overcoatings, felt cloth of every description, not elsewhere specified; horse-collar cloth, yarn, knitting yarn, fingering yarn, worsted yarn, knitted goods, viz, shirts and drawers, and hosiery not elsewhere specified, 7½ cents per pound, and in addition thereto 20 per cent. *ad valorem.*

Clothing.—Ready-made, and wearing apparel of every description, including socks and stockings, cloth caps, and horse clothing, shaped, composed wholly or in part of wool, worsted, the hair of the alpaca, goat, or other like animals, made up or manufactured wholly or in part by the tailor, seamstress, or manufacturer, except knit goods, 10 cents per pound, and in addition thereto 25 per cent. *ad valorem.*

Dress or costume cloths, serges, and similar fabrics, under 25in. wide, and weighing not over 3½ ounces per lineal yard, either or both 20 per cent. *ad valorem.*

All manufactures composed wholly or in part of wool, worsted, the hair of the alpaca, goat, or other like animals, not herein otherwise provided for, 20 per cent. *ad valorem.*

Treble ingrain, three-ply and two-ply carpets, composed wholly of wool, 10 cents per square yard, and in addition thereto 20 per cent. *ad valorem.*

Two-ply and three-ply ingrain carpets, of which the warp is composed wholly of cotton or other material than wool, worsted, the hair of the alpaca, goat, or other like animals, 5 cents per square yard, and in addition thereto 20 per cent. *ad valorem.*

Felt for boots and shoes and skirts, when imported by the manufacturers for use in their factories, 15 per cent. *ad valorem.* Felt for glove-linings and endless felt for paper-makers when imported by manufacturers for use in their factories, 10 per cent. *ad valorem.*

Winceys, plain, of all widths, when the material is not over one-fourth wool, 20 per cent. *ad valorem.*

Winceys, checked, striped, or fancy, not over 25 inches wide 20 per cent. *ad valorem.*

Winceys, checked, striped, or fancy dress winceys, over 25 inches wide and not over 30 inches wide, when the material is not over one-fourth wool, 2 cents per square yard and 15 per cent. *ad valorem.*

(But all checked, striped, or fancy winceys, over 30 inches wide shall be subject to duty as woollen goods when the material is partly wool.)

A German periodical devoted to the interests of the woollen trade states that a great change has taken place in Australia, since the Melbourne Exhibition, articles of German manufacture having now largely replaced English goods. The former, says the writer, are superior, not only as regards design and colour, but also as to quality. Moreover, as they are offered at lower than English prices, the market has passed into the hands of the Germans, and may henceforth be considered lost to Yorkshire, the majority of the contracts which were formerly concluded with Bradford houses having been transferred to their German competitors.

ORIGINAL DESIGNS.

On our first plate we give a design for a Linen or Tapestry Table Cover. Should any of our subscribers wish to work this design in tapestry, it would be well to weave it with two warps and two shuttles, something in the following manner :—Ground, black (warp) ; the foundation of the figuring in a medium olive green (weft), with shading in two or three delicate colours (weft) shuttled. The blossom effect in the centre of each figure should be in delicate shades (arranged in one warp), and the same shades might be thrown into other portions of the figures. This design would look equally well as a tapestry curtain. It has been designed by Mr. R T Lord, 3, Gerrard Street, Halifax.

* * * *

Our second plate represents a design for Cotton Dress Goods. This pattern will no doubt be useful for other classes of fabrics. Mr. R. T. Lord is the designer of this pattern.

* * * *

Our third plate shows a design for Tapestry Fabric, which has been drawn by Mr. J. G. Bowins, 68, Mawson Street, Manchester. In colouring this design, a good effect may be obtained by introducing a second warp as shading.

* * * *

*** We beg to inform Manufacturers and others that adaptations of Designs, published in the "Journal of Fabrics and Textile Industries," can be made at the Office by experienced Designers, and that Original Designs can also be furnished at moderate charges.

The Awards in the Prize Competition.

The awards in our Prize Competition for worsted and woollen goods, suitable for gentlemen's wear, have been made, and have resulted in the first prize of £2 being awarded to Mr. Fenwick Umpleby, Bond Street, Bradford Road, Batley. There was a great difficulty in judging the designs for the second prize, as those sent in by Mr. Charles Roberts, Rose Cottage, Troqueer Road, Dumfries, N.B.; and Mr. James Hendry, 3, Tannage Close, Hawick, N.B., were of equal merit; therefore, the second prize of £1, and the third prize of 10s., have been divided equally between these competitors, who receive 15s. each. The designs sent in, have been of more than average merit; but we are sorry that in some cases the competitors did not fully comply with the conditions laid down, and in consequence were disqualified.

Owing to the success of the competition, we intend holding another shortly, particulars of which may be had on application.

MONTHLY TRADE REPORTS.

Wool.—In London, since the close of the last sales, the market has been quiet and the general situation of the article remains unchanged. The consumption of fine wool continues large in all quarters, but the activity of the industry seems dependent on a moderate range of prices. The next series of sales will commence on the 21st inst. In Liverpool, business has continued of a dragging nature, notwithstanding the small quantity of wool on hand, and prices have had a weakening tendency. In the Scotch districts, trade has been of a dull character, but still a good tone exists, as far as prices are concerned, and hopes of future improvements in business exists. In the Yorkshire districts, the better qualities of wool have been in fair request, especially botany and colonial descriptions, and prices have kept firm. The lower sorts of English wools have met with a dragging sale, at slightly easier prices.

Cotton.—The markets for the raw material have not been of a satisfactory nature The tone has been generally quiet, with a slight reaction towards the close, to steadiness. The turnover has, if anything, been rather less than the average. A moderate business has been done in yarns and cloth, but at unremunerative prices. The export trade has improved slightly, a fair business having been done with the Continent, India, China, and Japan. The home trade seems to have been the least satisfactory.

Woollen.—Business in this branch has varied in its character in the different districts in which it is carried on. In Leeds, the mills have been running full time, but still trade has fallen off somewhat. The shipping branch seems to have had the run of business lately, whilst the home branch has been slacker. The demand has been principally for fine worsteds, fancy tweeds, serges, twills, and diagonals. In the heavy woollen districts, trade has been rather unsatisfactory, both as regards the business done and the prices realised In Huddersfield, business has not improved to any great extent. The mills generally are running full time, and prospects are a little brighter. The demand is principally for the finer qualities of coating and fancy cloths. In the Scotch districts, a fairly good trade has been done for certain classes of goods, and prospects for the ensuing season are generally good, although manufacturers have to work at a very small profit.

Linen —This branch, during the month, has been moderately busy, at firm prices. For the better descriptions of fabrics, a good demand has taken place at slightly increased rates. In the jute branch, the demand has been satisfactory, the business done being about an average, and prices continue firm. As a rule manufacturers are steadily engaged on orders that will last for some time to come.

Lace —The trade during the month has not gone through any material change. Prices of most goods have kept very low and show a further weakness. The demand for laces, except a few sorts, has been of a meagre description, and shows little signs of improvement. The curtain branch has not improved in any degree, and there seems very little prospect of an early revival of this part of the trade. The hosiery trade has been of a satisfactory kind in nearly all departments, and prices have had a hardening tendency.

Carpets.—Business has improved slightly during the month, and the prospects of manufacturers seems more hopeful than they did a short time ago. Many new designs are being brought out for next season's goods ; some novel effects both in pattern and colouring being given. The tapestry branch has improved, and there are hopes of increased business in this branch. The Brussels and rug departments have kept fairly busy, and as a rule better and more remunerative rates have been obtained. On the whole, there is a far more healthy outlook in this industry than has been the case for some time past.

Photo Portraits on Linen.

On the d'oyleys used at the dinner given to Mr. Irving was a beautiful photograph of the eminent tragedian himself, encircled with an attractive design in embroidery. The many favourable newspaper comments upon this purely British notion has evidently fired the national enthusiasm of the Yankee, for the manufacturers, Messrs Baylis, Gillies and Co., of Newgate Street. London, informs us that they have received an order from one house in America, probably in anticipation of Mr. Irving's visit, for this same d'oyley that will amount to upwards of £1,600. We are glad of this, as showing that British ingenuity and enterprise have not gone altogether to the dogs, as some would have us believe. We may mention that the same firm supply antimacassars, toilet sets, night-dress cases, and table-covers, as well as d'oyleys, upon which is photographed some one or more celebrity, the collection forming a series of all the principal men and women of the day. The portraits are perfectly fast in washing.

DESIGNED BY C. G. BOWINS

TAPESTRY FABRIC.

TABLE COVER.

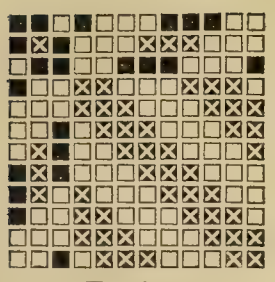
DESIGNED BY H. LOND

DRESS GOODS.

ORIGINAL DESIGNS.

Small Checks.

No. 87.



Design.

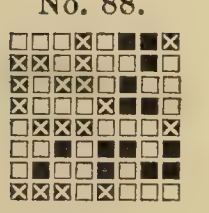
66 ends per inch.
66 inches wide in loom.
66 picks per inch.
11's reed.
6 threads in a dent.
56 inches when finished.

3 Black
3 Brown
3 Black
1 Crimson
1 Brown
1 Blue

} Warp and weft. All 2/36's worsted.

Crimson and Blue to be in places marked ■

No. 88.



Design.

66 inches wide in loom.
72 ends per inch.
72 picks per inch.
18's reed.
4 threads in one dent.
56 inches when finished.

Warp: 1 Bright Crimson and 1 Bright Orange silk 2/60 twisted together, 3 runs an inch.
2 Bronze Green worsted 2/36.
5 Black worsted 2/36.

8 threads.

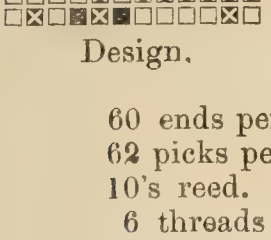
Weft: 1 Bright Orange and 1 Bright Blue silk 2/60 twisted together, 3 runs an inch.
2 Light Bronze or Lemon 1/18 worsted.
5 Black 1/18 worsted.

8

Commence warping and weaving according to plan.

Trousering.

No. 89.



Design.

60 ends per inch.
62 picks per inch.
10's reed.
6 threads in a dent.
66 inches wide in loom.
56 inches when finished.

Weft: Black.

Warp according to plan.

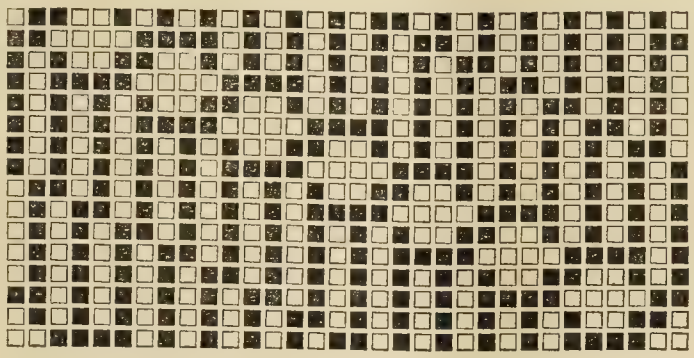
Warp 2/28's worsted.

Weft 1/16's worsted.

Warp: 6 Black.
1 White.
1 Black.
1 White.
1 Yellow Drab.
1 Black.
1 Yellow Drab.
6 Black.
1 White.
1 Black.
1 White.
1 Blue.
1 Black.
1 Blue.
6 Black.
1 Yellow Drab.
1 Black.
1 Yellow Drab.
1 Green.
1 Black.
1 Green.

Worsted Coating.

No. 90.



Design.

Warp: 36 Black worsted 2-fold 10,080 yards per lb.

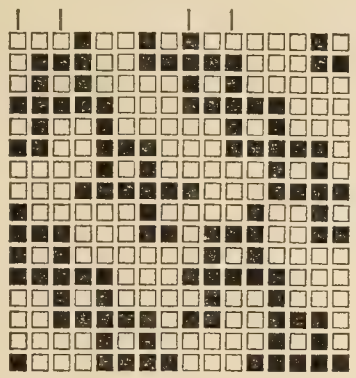
Weft: The same as the warp. Draft straight over.

This pattern will require the jacquard in weaving.

5120 threads in the warp.
120 porters—40 threads in each porter.
66 inches in the loom.
18's reed.
8 threads in each split.
56 inches wide when finished. Clear finish.

Worsted Coating—Double Cloth.

No. 91.



Design.

Brown mixture through squares marked —

Warp:
1 thread Black and Crimson twist.
4 threads Black.
1 thread Brown mixture.
1 thread Black.
1 thread Brown mixture.
5 threads Black.
1 thread Brown mixture.
1 thread Black.
1 thread Brown mixture.

Weft: Black.

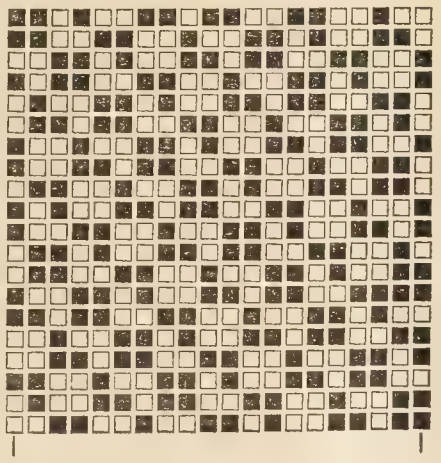
This pattern can be can be made in 12 leaves by means of a draft.

Warp and weft yarns 30 cuts—5,500 yards per lb.

4000 threads in the warp.
100 porters.
70 picks.
27's reed Scotch, or 14's Yorkshire count.
4 threads in a split.
56 inches wide when finished. Saxony finish.

Saxony.

No. 92.



Design.

The two leaves or shafts marked — are those upon which the high colours should be.

Warp:
4 threads Black.
4 threads Light Olive Drab.
4 threads Black.
3 threads Light Olive Drab.
2 threads Crimson.
3 threads Light Olive Drab.
4 threads Black.
4 threads Light Olive Drab.
4 threads Black.
3 threads Light Olive Drab.
2 threads Light Blue.
3 threads Light Olive Drab.

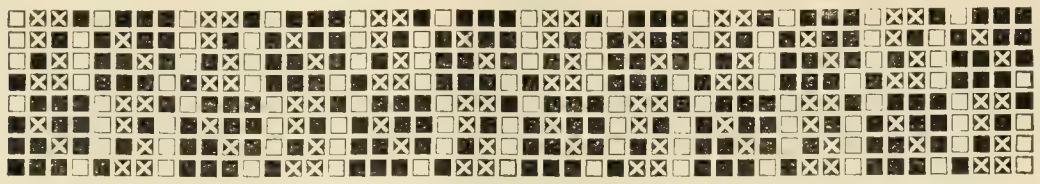
Weft: Same as warp with these colours — Black, Light Black, Grey, Crimson, Light Brown, Yellow.

Draft straight over.

Warp and weft yarns 30 cuts—5,500 yards per lb.

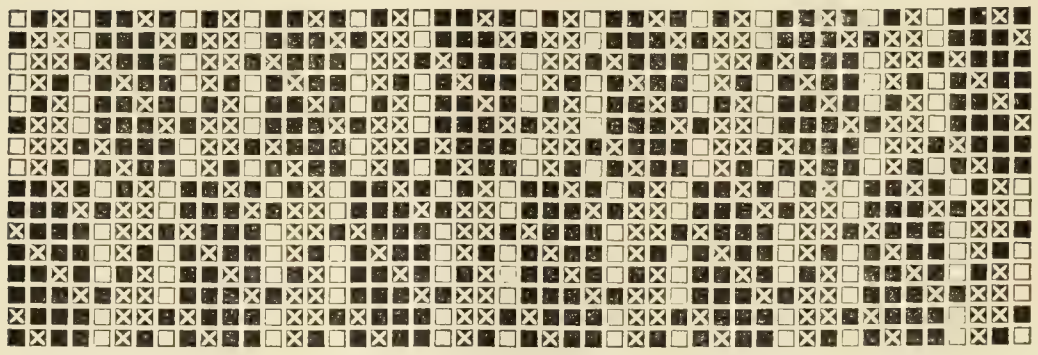
3120 threads in the warp.
78 porters of 40 threads.
44 shots or picks.
20's reed Scotch count, or 10's reed Yorkshire count.
4 threads in a split.
72 inches wide in loom.
56 inches wide when finished.

No. 93.



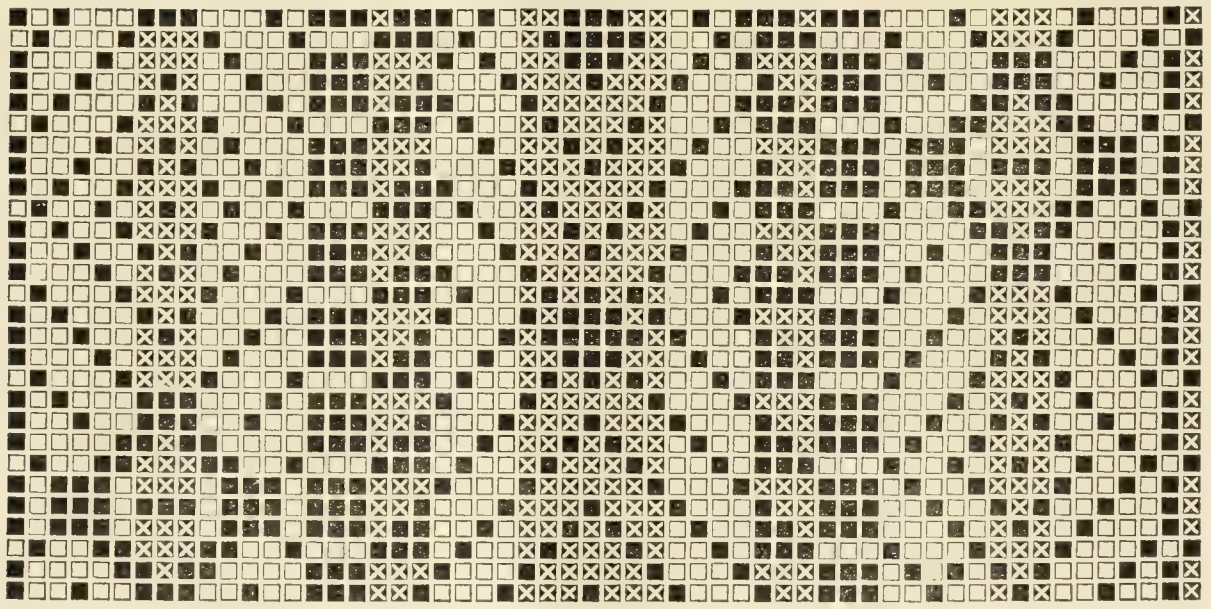
Design.

No. 94.



Design.

No. 95.



Design.

Shirtings, Ginghams, &c.

Nos. 93 and 94 are both 48-end patterns, and are reversibles. The warp, which is as follows, is for both designs :—

1 thread white.

2 threads Blue and White, 6 times.

2 threads Red 2 White, 5 times.

2 threads Red 1 White.

In cutting the cards cut □ and ⊠

No. 95 is a 56-end pattern with warp as follows :—

6 threads White 3 Blue.

8 threads White 3 Red.

4 threads White 7 Blue.

4 threads White 3 Red.

8 threads White 3 Blue.

6 threads White 1 Red.

In cutting cards cut all □ and ⊠

Irish Lace Manufacture.

In compliance with the wishes expressed by the authorities of the schools of art and the art industrial exhibitions now being held at Cork and at Limerick, the Lords of the Committee of Council on Education recently deputed Mr. Alan Cole, of the Science and Art Department, South Kensington, to deliver lectures upon the art of lacemaking at both these towns. These lectures, fully reported by the local press, were given, and attracted considerable audiences, and a marked desire has been manifested to improve Irish lace work, by providing lace makers with new patterns, and giving them opportunities of consulting specimens of old lace. Whatever difficulties might attend the introduction of new patterns into the ordinary channels of trade, it appears to be evident that much could be done at the numerous convents, where nuns give regular instruction in lacemaking to the school children placed under their care. The demand for Irish laces is growing in extent every day, especially for the Cork crotchet work. The patterns worked in crotchet, however, are of a rude and poor character, and it is feared that unless the style of them can be bettered that a prosperous condition of the manufacture and trade may not be maintained. It is quite evident that while the workmanship of the Irish laces is good the designs or patterns are indifferent.

Waterproof Military Cloths.

The French War Department has been making experiments in view of using clothes rendered waterproof by means of an alumina solution. Eminent doctors have found the military clothing thus obtained to answer all conditions from an hygienic point of view, and the chemical analysis of the same has shown that the liquor used does not injure the stuff or spoil its colour. The method used is as follows :—The goods which have to be rendered waterproof are introduced into a solution of acetate of alumina, then taken out, and, without being squeezed, are dried in the open air and are then ready for use, The solution of acetate of alumina is obtained by dissolving eight ounces of alum in one and a half gallons of water, and then mixed to this solution a solution of eight ounces acetate of lead which has been dissolved in one and a half gallons of water. A precipitate forms, which is sulphate of lead ; the liquid is acetate of alumina, which is decanted and used as above.

American Pile Fabrics.

We have received from the Tingue Manufacturing Co., of Seymour, Conn, U.S.A., some excellent specimens of pile fabrics of various kinds, specially adapted for upholstery purposes. They have been sent us to show what is being done by manufacturers in this line of business in the United States. We are informed that the specimens have been manufactured by machinery of a special make, and which have been made in the workshops of the above company. The samples sent include sealskins, plain and embossed plushes, &c. ; the latter are mostly adapted for upholstering furniture, railway cars, &c. In colouring and design, the patterns are of a superior order, and show that in this class of textile manufacture, this company is well to the front in the goods they are producing.

The Huddersfield Fine Art and Industrial Exhibition.

The Huddersfield Fine Art and Industrial Exhibition, which was opened last month by the Duke of Somerset, K.G., bids fair to be as successful as the exhibition held at Bradford last year. The buildings, which occupy 20,000 feet more ground space than those at Bradford, are filled to their utmost capacity with exhibits. These exhibits are, on the whole, of a superior character, and are sure to bring to the exhibitors a return for the energy they have displayed in putting before the public such a variety of excellent specimens of their manufacture. The displays of machinery adapted for textile manufactures are of special excellence. The motive power is supplied free of expense to the Exhibition Committee by two well-known firms, and is entered as ordinary exhibits.

Messrs. W. & J. GALLOWAY & SONS, OF MANCHESTER, have furnished one of their patent boilers, and also have fixed a compound engine of 125 indicated horse-power. With these they are running a part of the machinery, &c., in the building. The engine, which is an admirable specimen of solid workmanship, has several special features. One is that the cylinders are as close together as possible, by which means the steam is off the high pressure piston and on to the low pressure piston without any wire drawing or loss of power. It has, in addition, an improvement in a new cut-off governor, which has only been patented within the last few weeks. This governor controls the engine automatically, and adapts it to a variable load. The governor has also, it is said, a wider range, and is more rapid than the governors in ordinary use. The cranks are set at an angle of 25 degrees, the effect of which is that when the steam goes off one point to the other there is so much less space to fill up in the cylinder, and consequently more power is derived. The flywheel, cast in one, but split afterwards, as a necessity for transit, is 15 feet in diameter, weighs six tons, and the stroke is 2 feet 6 inches. The cylinders are 14 inches and 24 inches respectively. All the valves are on the flat side principle, and the engine will get as near as possible the full boiler pressure, working with all the valves open.

Messrs. WOOD BROS., OF SOWERBY BRIDGE, supply the remainder of the motive power with one of their tandem engines. It is of 50 indicated horse-power, but on account of limited space, has been adapted for high pressure. It is fitted with variable cut-off valves, and has several improvements which add to its efficiency. The fly wheel is 11 feet 6 inches in diameter, 20 inches over the face, and weighs about 5½ tons. The engine is of a superior class, and does its portion of the driving of the machinery in an effectual manner. It is supplied with steam from a boiler made by the Oldham Boiler Works Company, which is fitted with Fox and Hopkinson's patent corrugated flues. Messrs. Wood Bros.' engine also supplies power for the electric light.

THE KIRKSTALL FORGE CO., OF KIRKSTALL, near LEEDS, has fixed the whole of the shafting in the exhibition. It is their patent rolled shafting, for which they claim a saving in the cost, and at the same time that it is of a much stronger material than the shafting generally in use. It is quite as true and straight as turned shafting, and may be cut to any required length. It is fitted with Butler's patent frictional couplings, which require neither bolts nor keys, and are worked by friction.

Messrs. HUDSWELL, CLARKE & CO., RAILWAY FOUNDRY, LEEDS, make an excellent display of their wrought-iron pulleys, both split and solid. They are of wrought-iron throughout—rim, arms, and boss,—and are in various sizes from 6 inches diameter upwards. They are too well known to need any detailed description of their merits, and judging by the enormous sale they have had—more than 35,000 being now in use—they must be running in nearly every factory in the United Kingdom. We may add that Messrs. Hudswell, Clarke & Co., have fitted pulleys to the whole of the shafting in the building, and they are working to the entire satisfaction of the committee.

Messrs. P. & G. GARNETT, MACHINISTS, CLECKHEATON, whose names appears in the catalogue, were, we are given to understand, unable to complete their machines for the Exhibition, owing to a press of orders. The space which they were to occupy is still vacant. We may, however, add that they intended exhibiting machinery, &c., similar to that displayed at the Bradford Exhibition—a full description of which we gave in our notices in a former number. These machines, &c., are: the well-known machine, "Garnett," which has been considerably improved in many particulars, the principal one being the having a larger number of teeth per inch on the cylinders, than in ordinary machines; cotton gins, and an improved cleaning and burring machine, &c. The specialities made by this firm are, as regards material and workmanship generally, of a superior class, and we should have much liked to have seen them represented in the Exhibition.

Messrs. PLATT BROS., of OLDHAM, show the French system of worsted spinning; a full description of which was given in a former issue of our Journal, and for which we must refer our readers to our back numbers.

Mr. G. A. BINNS, ARCHER STREET, HALIFAX, shows a case which contains a great variety of machine combs for combing wool, silk, and flax. The combs range from three to about forty pairs to the inch, and are set at various angles. In the centre of the case is a small circle for Noble's combing machine for fine wools, and near it is a long brass porcupine for silk. It is 2½ inches diameter, with 2-inch hole. It has 21 rows of short stiff pins set at a sharp angle. The most puzzling thing about this comb is that all the pins are driven home from the inside. Another prominent sample are two large filling engine combs for silk; one has two rows of flat, and the other three rows of round pins, set at an angle of 45 degrees. Both are splendid combs. The rest of the samples vary in size and shape; some have round and some flat rows, some both. There is a sample of the brass, from which, where possible, the combs are made; it is twisted in various ways, to show what strain it will stand before breaking. There is also a sample of cast brass, showing at once the difference between the two. The variety is great, whilst each comb shows great precision in the insertion of the teeth, as well as great strength, the metal used being the best for the purpose. The whole of the samples show that they are, in point of workmanship, in the first rank, and, as specimens of skill in the producing of this class of work, they are of exceeding merit.

Mr. JOHN RUSHWORTH, MODEL MAKER, INDUSTRIAL ROAD, SOWERBY BRIDGE, YORKSHIRE, exhibits a large number of models of various parts of machinery, including machine-cut wheels and racks, in iron, brass, and wood, in which are shown the various forms of teeth, &c. These are cut with the greatest precision by special apparatus, and being very true, and accurately divided, they, in a high degree, cause the machinery, of which they are a part, to work evenly and easily, a desideratum of the utmost consequence in the finer portions of machinery, and no less so in the heavier parts where the details are to be worked out to a nicety. The models include a number of specimens of wheels in various sizes and varieties, from bevel wheels, for heavy work and for shaftings, down to the smallest cog wheels for use in very delicate machinery. These are all of superior workmanship, and show that the greatest care has been taken in their production. The case also contains models of engines, lathes, shearing machines, &c., all of which prove that a thorough practical knowledge of the business of modelling has been brought to bear in the making of them. There are various other models, too numerous to particularize, all of equal merit with the above.

Messrs. DRONSFIELD BROS., of OLDHAM, show a patent card mounting machines, for mounting card fillets on cylinders, doffers, &c., of carding engines; a patent grinding frame, fitted for turning up and mounting the cards on rollers, and for grinding either one or more rollers, &c.; and also some patent grinding rollers covered with emery. The whole of these machines we have described fully in a former number, it is therefore unnecessary to enter into details again in our columns.

Messrs. JOHN HAIGH & SONS, MACHINISTS, HUDDERSFIELD, are well represented in the woollen branch of textile machinery. They show a teaser, for the opening and mixing of wool. It has a self-acting feed, which can be varied, so as to take in more or less material, and has also a self-acting delivery, &c. It will work from 400 to 1400 lbs. of wool per hour, according to the quality, &c., of the material being acted upon. They also exhibit a tenter hook willey, capable of turning out from 300 lbs. to 1000 lbs. of wool per hour. Both the above machines are of a superior class, indeed, the whole of the exhibits of this firm are really excellent In addition, they show a number of carding machines for manipulating wool in various stages of manufacture.

Messrs. SCHOFIELD & KIRK, MACHINISTS, HUDDERSFIELD, have a capital exhibit of looms, mules, &c. A loom for the weaving of Scotch tweeds is to be specially commended. It has a reed space of about 106 inches and four shuttle boxes on each side, has patent top jacks, &c., and will easily work at 56 picks per minute. It is fitted with 28^{s} Jacquards and has reversing, picking, and letting-off motions. Another loom for worsteds is 9-4 wide, has 84-in. reed space, with three shuttle boxes on each side, Jacquards 20^{s} has patent box motions, &c., with various improvements, and works 80 picks per minute. The whole of the looms are working in a satisfactory manner, and are a production worthy of this firm. In addition, they exhibit a self-acting mule, for 200 spindles, with 2½-inch guage, to work after condensers. It is fitted with Blamires' patent scroll motion and new gear arrangements. The principal advantage in this scroll motion is that the spinner can more readily reach its working parts than in many other machines. We understand that, by the above arrangements, a change can be effected by the spinner in a few minutes, such as formerly took about six hours.

Messrs. HUTCHINSON, HOLLINGWORTH & CO., MACHINISTS, DOBCROSS, display four looms adapted for the weaving of shawls, rugs, fancy cloths, worsted coatings, tweeds, &c. These are all admirable specimens of weaving machinery, but perhaps the most noticeable, and the loom that will cause the greatest interest, is that known as the American loom. It is calculated to run from 90 to 100 picks per minute double beam, and 120 picks single beam. The great improvements which have been effected in this loom are in the ease with which the boxes work, the positive or decided quick motion of the healds, the easy method of weaving or pulling back in case of damage to the piece, and also the method of regulating the speed at which it is desired to run the loom. In addition to this American loom, this firm shows a loom for the weaving of worsted and fancy woollens, which is said to be the "swiftest on record." They show other looms for weaving fabrics as given above.

Proposed Technical School for Halifax.

During the past week or two, much has been said in favour of building a Technical School in Halifax. This is as it should be, and we are anxious to see the proposal merge into reality. A committee has been formed, the members of which have been carefully chosen from the Town Council, the Chamber of Commerce, and the School of Art. With such a committee, the project should soon assume a tangible aspect. We wish the undertaking all the success it deserves.

The Tariff on Carpets in the United States.

In reviewing the change in the duties on carpets and in the raw material in the United States, the *New York Carpet Trade* says :—"Now that the carpet manufactures have reduced their prices to meet the changed conditions wrought by the new tariff, the first step has been taken in the direction of free trade, whose advocates will doubtless entertain a joyful view of the situation. Whatever may be the effect of the new tariff upon producers of other kinds of goods, it deals harshly with the manufacturers of carpeting. The slight reduction in the duty on wool is fully offset by an increase of the duty on other component materials, while the reduction in the prices for manufactured goods is measured by a decrease of from five to seven and a-half cents per yard on the list prices. This reduction on the part of the manufacturers was necessary to retain the trade for Americans looms, and notwithstanding the reduced prices for fall season, some orders for foreign goods have been sent out With a prospect of continued agitation and of further legislative action in the direction of free trade at no distant day, the ultimate outlook for home manufacture is by no means encouraging. Only a few steps similar to that recently taken by Congress are needed to stop the carpet-making machinery of the United States altogether, leaving the American people to be supplied entirely from abroad. Such a result would be disastrous to millions of dollars of capital and to tens of thousands of men, women, and children, now employed in the carpet industry of this country. The prospect of closed factories, idle capital, and unemployed operatives, is by no means inviting, but possibly the free trader may find solace in contemplating the fact that, after years of waiting, he can at last buy his carpet from the cheapest market, and not be forced to encorage domestic manufacture."

Purification of Water for Manufacturing Purposes.

The importance of a discovery for the purification of water which can be scarcely over-rated, if it should prove successful, has been brought under our notice. The process, which has been patented by Mr. A. Goldthorp, of Wakefield, who is a woollen manufacturer, is said to be not only effective, but inexpensive. The following particulars of the invention have been furnished to us. It is only too well known by manufacturers generally, that one of the great drawbacks they have to contend with in their business is the presence of lime in the water which they use—a substance with which all water is more or less impregnated. It is this lime that coats the insides of our kettles (to use a homely illustration) with shale, and which also causes water we wash with, when soap is used to curd. Exactly the same thing occurs, though on a correspondingly large scale, on the one hand, in all manner of steam boilers, and on the other hand, in manufactories this curding of the water is not only a great injury to goods which are passed through it by making them rough and hard, but it also compels the usage of one third more soap than would be the case were there no lime present. In the same manner it affects all dyes : a larger quantity of dye is required to produce a certain shade in all fabrics when lime is held in solution in the water than is the case when the lime is absent. It will therefore be seen that the question of getting rid of this substance (deleterious to all manufacturers, though not unwholesome in drinking water), must be a matter for serious consideration amongst all manufacturers. For a long time Mr. Goldthorp has been experimenting upon the water he uses in the course of his business, and by slow degrees he has at last obtained that perfection which will enable him to turn out, at a cost to himself of at least 25 per cent. less than formerly, goods of greater value because of their softer texture, brighter shade, and better bloom. To save heavy water rents, Mr. Goldthorp has, like other manufacturers we could mention, sunk a well upon his premises to the depth of fourteen yards, with a four-inch bore at the bottom extending six yards deeper. The water from this well is not only "hard" (or impregnated with lime), but it also contains a considerable quantity of iron, the latter of which is easily removed by the application of heat, and the former of which Mr. Goldthorp has only recently succeeded removing thoroughly. The process is simple, and although Mr. Goldthorp very properly withholds the secret of his discovery (the chemical compound which he uses to precipitate the lime), yet we can describe the process through which the water passes. The water is chalybeate, and decidedly bad for manufacturing purposes. We presume other wells in the neighbourhood would be of the same quality. The calcic and magnesic salts, as well as the carbonate of iron, destroy boilers by corrosion, and are fatal to those bright dyes which the French so much excel in. By the simple treatment pursued at this mill—the settling and admixture, with the use of settling tanks—a perfect fluid is obtained, as well as a commercial pigment in the ferruginous residuum.

Mr. Goldthorp explains that the water is useful for three purposes after it has been treated by his process. In the first place, it will be invaluable to engine owners, for there being no iron or lime in the water, incrustation of the boilers is impossible, and 25 per cent. of the coal is saved. Lime is a non-conductor of heat, and the fur in boilers prevents the full heat from the fire getting to the water. There is also a saving in the cleansing of the boilers. Secondly, to scourers it is most important that the water should be soft, and lime prevents the action of the bleaching chemicals, causing far more soap and potash to be required. Thirdly, the removal permits all dyes to act directly upon the materials, instead of having to permeate the lime first, and a smaller quantity of dye will therefore suffice to produce the same tones of colour.

Mr. Goldthorp's stokers, scourers, and dyers all testify that there is a great saving in each of their departments. In fact, in the scouring room so great is the economizing influence, that the use of powdered soap is altogether done away with, and not so much of the other soap required. The difference in the material dyed under the old style and under the new, is thus exemplified, and Mr. Goldthorp's visitors are greatly surprised at the deeper and richer shades that are produced with the same quantity of dyes and with less soap and less labour. The deep and rich colours of the blue and maroon wools produced by the old process, are surprising, whilst the warm and brilliant colours of the scarlet and lighter blue wools are equally pleasing.

ODDS AND ENDS.

Late mail advices from Yokohama, again report the market for imports very quiet. There had been more activity in the silk market, and prices for certain descriptions had advanced, the market being almost bare of stocks.

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At Como, the head centre of the Italian silk manufacturing industry, the relations between employers and their hands are at present very much strained. The hands demand a general improvement in their condition, but the manufacturers do not seem inclined to make the slightest concession. A meeting of the discontented hands was held the other day, and dispersed by the police,

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The London Clothworkers' Company. who have for years past liberally aided the cause of technical education, resolved at a meeting of the Court of Governors to make an additional grant of £10,000 to the Yorkshire College at Leeds. This generous contribution will be applied to the enlargement of the Textile Industries Department, more extensive accommodation being required for both the dyeing and weaving sections.

* * * *

According to the *Eastern Express* of Constantinople, advices received from Broussa state that sericiculture has been very successful in that province this year. This result is attributed to the use of eggs selected by M. Pasteur's method of microscopic examination, the supplies having been specially recommended to the cultivators by the local authorities. Large supplies of cocoons are arriving continually in the Broussa bazaar, and notwithstanding the abundant supply prices are higher than they were at the beginning of the season, a fact which seems to testify to excellence of quality.

* * * *

The prospects of the continental silk crop remains still favourable as to quantity, but the quality leaves much to be desired in many cases, so that the tendency of prices remains firm. The half-yearly stocktaking has done much to limit the amount of trade in piece goods, manufacturers as well as merchants having been occupied with the balance. The generally favourable prospects of the harvest are considered as likely to affect in a favourable manner the trade of the latter part of the year in various European countries.

* * * *

The Manchester Chamber of Commerce has received from the Foreign Office a copy of the charter incorporating "The World's Industrial Cotton Centennial Exhibition," which is to be held in New Orleans, in December, 1884. The chief exhibit will be "cotton in all its conditions of culture and manufacture," but the exhibition will also include "all arts and manufactures and products of the soil and mine," and it is intended further to illustrate all branches of trade and commerce with the view of promoting arts and manufactures, of advancing and improving agriculture, and extending and facilitating the interchange of manufactures and products of soil and mines between the various sections of the United States and with foreign nations.

* * * *

The most recent report of the Department of the Interior, states that there are in Switzerland 8,642 factories and workshops under legal supervision, 1,472 of which are worked by machine power. Of these, water furnishes the movement to the amount of 41,316 horse-power, steam to the amount of 18,064, and gas to the amount of 117. The number of operatives employed are 134,862, of which 78,364 are males, and 64,498 females. There are 10,462 children between 14 and 16 years of age, 14,590 between 16 and 18, and 109 810 over the latter age. The textiles, such as cotton, silk, woollen, and linen, occupy 1,619 factories, with 85 705 workpeople ; 68 establishments carry on tanning, leather dressing, hair weaving, &c., with 3,753 hands ; there are 6,636, hands employed in 143 food-preparing shops ; 2,749 in 102 chemical works ; 4.950 in 150 printing shops. There are also 111 wood-working establishments, occupying 2,913 hands ; 352 for clock and jewellery making, with 24,988 workpeople ; and 96 for glass making, &c., with 3,170.

NOTICE TO ADVERTISERS.

Advertisements will be inserted at the following rates; (in all cases prepaid): *Twenty words, One Shilling; Sixpence* for each additional *Twelve words* or part of *Twelve*. The address being counted as part of the Advertisement.

Displayed Advertisements according to arrangement.

Wanted.

SITUATION desired by advertiser as SECRETARY, ASSISTANT-MANAGER, or other position of trust. Good correspondent in French and German, and accustomed to travel. Twelve years' engineering experience, and competent inspector of machinery. Well known over the north of England. Address L. R., care of John Dale and Co., 17, Bridge Street, Bradford.

To be Let or Sold.

TO BE LET, desirable and commodious PREMISES, recently used as a Silk Mill, containing ground floor office, two storerooms, two ditto over same, large and light workroom, 167 ft. by 29 ft., room over same, blacksmith's shop, 50 ft. by 16 ft.; engine house, 26 ft. by 17 ft., in which are two six nominal h.p. horizontal engines coupled together, and Howard patent boiler; room over same, chimney stack, 130 ft. high; frontage to road, 33 ft. 8 in.; piece of garden attached. Further particulars apply Thomas Walker, Oldbury Works, Tewkesbury.

TO BE SOLD by Private Contract, as a going concern, all those valuable COTTON MILL and PREMISES, known as Busk Old Mill, situate at Busk, in Chadderton, near Oldham, in the county of Lancaster, with the reservoirs, steam engines, boiler, mill gearing, steam and water piping thereto belonging, together with the machinery contained therein; consisting of 15 double carding engines, and the necessary preparation to follow: the whole to be sold subject to a mortgage. For further particulars, or order to view, apply to Mr. J. H. Noble, auctioneer and valuer, 21, Union Street, Oldham.

THE GAZETTE.

Liquidations by Arrangement or Composition.

Barlow E., Pollard Street, Ancoats, Manchester, yarn doubler.
Moore W. C., Corporation Street, Manchester, cotton doubler.
Jones E. J., 12, Fore Street, London, wholesale clothing and shirt manufacturer.
Clarke J. H., A. Carter, and H. Townend, 17, Monkwell Street, London, warehousemen and commission agents.
Wainwright J., 73, Church Gate, Leicester, hosiery manufacturer.
White J. S., 51 and 52, Red Cross Street, Cripplegate, London, crape and collar manufacturer.
Perry H., 59, South Street, Park Lane, Middlesex, vestment maker, &c.
Burrell T. J., 14, Knightrider Street, London, mantle manufacturer.
Bowles J., Oadby, Leicestershire, hosiery and sack manufacturer.
Cooper R W., H. Godber, and F. A. Morgan, Sutton-in-Ashfield, hosiery manufacturer.
Hope Nathan, Robert Street, Cheetham, Manchester, hat manufacturer.

Sequestration.

Campbell Alexander, merchant, Leckhelm, Lockbroom, Ross.

Dividends.

Rutter H., 251 and 253, Great Ancoats Street, Manchester, baby linen manufacturers; first and final dividend of 4s. 2d. in the pound, at the offices of Mr. W. Stavart, Longford Chambers, 1, Piccadilly, Manchester.
Pearson N. H., 6, Park Place, Leeds, Yorkshire, cloth manufacturer; first and final dividend of 8d. in the pound, at the offices of Isaac Senior, 30, East Parade, Leeds.
Treece T., jun., 51, Goose Gate, Nottingham, smallware dealer; first and final dividend of 2s. in the pound, at the offices of Henry Young, trustee, Parliament Chambers, Nottingham.
Adams Caroline, 7, The Grove, Hackney, trimming manufacturer; first and final dividend of 1s. 7d. in the pound, at 29, Jewin Crescent, London.

Dissolutions of Partnership.

Quitzow and Co., Bradford, yarn merchants.
Prescott and Twyford, Liverpool, cotton brokers.
Ede Bros., and Thompson Manchester and Bradford, merchants.
Hoyle and Wilkinson, Church, cotton manufacturers.
Hall J. W., and Lord E., Whitefield, near Manchester, cotton manufacturers
Hinchliffe S., and Ashworth W. H., Moss Mill, Higginshaw, Oldham, Lancashire, cotton doublers.
Harrison E. H., E. Habershon, and C. W. Smith, Rumford Street, Liverpool, cotton and general brokers.
Prescott W., and J. S. Twyford, Liverpool, cotton brokers.
Stavert F., and C. Neef, 75, Cannon Street, Manchester, Manchester merchants.
Stoltenhoff H. M., C. E. Stoltenhoff, and F. E. Stoltenhoff, Wool Exchange, Coleman Street, London, wool brokers.
Walker J. B., W. H. Walker, and B. Walker, Lenton, Nottinghamshire, lace manufacturers.
Cross C., and C. Cross, jun., 19, Gutter Lane, London, silk manufacturers.
West J., and F. Lord, Milton Mill, Bingley, Yorkshire, worsted manufacturers.
Leite Pinto and Brother, London and Manchester, merchants.
Robinson Joe, Brockholes, near Huddersfield, manufacturer.
Tootell R. and Co, Larkhill Mill, Blackburn, Lancashire.
Barry T., and G. F. Leffler, 1, Holloway Street, Commercial Road, Middlesex, cocoa matting makers.
Dean A., and W. J. Beale, 38, Wood Street, London, agents and warehousemen.
Hayes J, C., W. M. Candy, C. F. Hogard, and L. Durieux, 64, Friday Street, London, warehousemen and agents.
Ingle J., G. E. Leach, and Sarah Leach, Bradford, Yorkshire, worsted spinners and stuff manufacturers.
Playne A. T., E. Kimber, W. H. Smith, and F. H. Smith, 18, Coleman Street, London, woollen cloth manufacturers.
Tatham H., and H. Parker, Melbourne, Derbyshire, lace manufacturers.
Berry Joseph and Brother, Manchester, yarn agents, by death of Joseph Berry.

Bills of Sale.

	£	s.	d.	
Saniford S., Unsworth, bleacher and dyer	100	0	0	
Bestwick J., Long Eaton, lace manufacturer	absolute sale.			
Redding B., 3, Shore Road, South Hackney, braid manufacturer	40	0	0	&c.
Holmes A., 276, Bradford Road, Scotcholme, Nott., lace maker	50	0	0	
Carter J., Cross Hills, Greetland, cotton doubler	300	0	0	
Clegg W., Broadfield, Haywood, yarn and commission agent	50	0	0	
Copsey T., Brookfield, Glemsford, matting, &c., manufacturer	60	0	0	
Mellor J., Cheetham, Manchester, flock and wastedealer	150	0	0	ab.s
Roxby, R. W., Stoke Newington, manufacturer of underclothing	75	0	0	
Stanley Emma, Mark Lane, Liverpool, lace transferrer, &c.	370	0	0	

PATENTS.

Applications for Letters Patent.

Blue colouring matters. H. J. Haddon, Kensington. A communication	16th July 3491
Boiler composition. S. Pitt, Sutton. A communication	9th July 3395
Broadcloth and other textile fabrics, folding of. H. J. Haddon, Kensington, Middlesex. A communication	2nd July 3269
Bleaching kiers. J. K. J. Foster, Bolton	6th July 3351
Compound for rollers, &c., in spinning machines. E. Edwards, Chancery Lane. A communication	23rd July 3617
Cotton cloth. H. H. Lake, New York. A communication	21st July 3597
Colouring matters. F. Wirth, Frankfort-on-Maine. A Communication	16th July 3498
Combing machines. J, H. Whitehead, Leeds. A communication	30th June 3426
Carpets. T. T. Radford, Kidderminster	11th July 3419
Colouring matter. F. Wirth, Frankfort. A communication	17th July 3523
Colouring matter. F. Wirth, Frankfort. A communication	17th July 3527
Composition for fustians, &c. J. Sellers, Manchester	2nd July 3263
Combing machinery. W. Terry and J. Scott, Dudley Hill, Bradford	2nd July 3264
Carpets and other fabrics. T. T. Radford, Kidderminster	7th July 3373
Cutting double velvets. H. Springman, Berlin (E. Cohnitz, Elberfeld	30th July 3710
Designs upon rollers for printing, &c. J, J. Sachs, London	30th June 3258
Dyeing vessels. J. Woodcock, Huddersfield, and J. Coulter, Batley	3rd July 3284
Dyeing aniline colours, &c. L. Heppenstall, Milnsbridge	17th July 3522
Embroidering machines. R. H. Bradon, Paris. A communication	17th July 3509
Embroidery. C. F. Bally, Schœnenwerd	20th July 3577
Fibrous substances. A. W. L. Reddie, Chancery Lane. A communication	18th July 3538
Fixing colours on fabrics. A. W. Kirk, Halifax	11th July 3422
Fallers for flax, silk, wool, &c. J. W. Bradley, Bradford	26th July 3659
Gas engines. J. Pickering, Stockton-on-Tees	28th July 3703
Looms. R. L. Hattersley and J. Hill, Keighley	6th July 3348
Looms—smallware. T. Hirst, Manchester	6th July 3352
Looms. T. Hanson, Bradford	12th July 3439
Looms. J. S. Park, Stockport, and J. Park, Manchester	12th July 3442
Looms for weaving. R. H. Brandon, Paris. A communication	25th July 3655
Machinery for spinning and winding yarns, &c. W. Lancaster, Accrington	28th July 3694
Ornamental or decorative fabrics. W. Clark, Chancery Lane. A communication	24th July 3630
Pickers for use in looms. J. K. Tullis, Glasgow	25th July 3643
Polishing or finishing textile fabrics. J. H. Johnson, Lincoln's Inn Fields. A communication	24th July 3641
Pickers, &c. J. Holding, Lower Broughton	13th July 3448
Pulleys and wheels. T. Smith, Brockley	29th June 3236
Spinning machines. J. Farran, Manchester	4th July 3304
Sewing or embroidering machines. W. E. Gedge, London	13th July 3456
Steam-engines. H. J. Allison, Holborn	17th July 3499
Sewing machines. J. W. Post, New York. A communication	17th July 3506

Spinning and twisting rings. B. Mayoh, Bolton 20th July 3567
Steam-packing. J. V. Taylor, Warrington 21st July 3581
Spinning and doubling cotton. E. Dyson, Bolton 21st July 3587
Scouring, washing, &c., machines. J. Petri, Rochdale 21st July 3591
Steam boilers. W. Clark, Chancery Lane. A communication 23rd July 3618
Spinning and roving machinery. T. E. Smith, Keighley 28th July 3689
Stop motions for looms. A. W. L. Reddie, Chancery Lane, Middlesex (Pruvot Bouy et Cie, Paris) 30th July 3722
Tulle or lace machines. C. D. Abel, Chancery Lane, A communication 30th June 3242
Winding or preparing slivers for combing machines. W. Terry and J. Scott, Dudley Hill 2nd July 3265
Winding machines for yarn. G. Bernhardt, Radcliffe 18th July 3530

Grants of Provisional Protection for Six Months.

2935	2942	2958	2960	2961	2970	2983	2987
2999	3006	3009	3033	3040	3041	3063	3068
1306	3506	3509	3075	3076	3083	3094	3095
3103	3108	3118	3137	3139	3144	3149	3153
3166	3172	3180	3188	3194	3208	3215	3216
3242	3243	3248	3263	3264	3265	3269	3284
3286	1517	2289	2368	3005	3193	3348	3352

(All of 1883.)

Notices to Proceed.

Bleaching, &c. apparatus. J. Farmer, Salford 8th June 2871
Braiding machines. R. Longford and F. B. Welch, Manchester 12th March 1297
Belting. J. K. Tullis, Glasgow 9th June 2876
Blue colour, substitute for indigo. W. H. Spence, Chancery Lane 29th March 1589
Carding machines. Carl Reper, Berlin 26th April 2107
Condensing wool, &c. J. Wilkinson, Yeadon 13th March 1318
Drying ovens for fabrics. G. F. Edwards, Nottinghill 12th June 2909
Dressing stiff net. G. Marwity, Penge, Surrey. A communication 3rd March 1148
Dyeing loose cotton black. Gerard W. Von. Nawrocki, Berlin. A communication. 7th March 1223
Disintegrating fibres. G. and J. E. Tolson, Dewsbury 16th March 1408
Embraidering machines. R. H. Brandon, Paris 17th July 3509
Felt carpets. J. Barcroft, Waterfoot 7th June 2846
Finishing lace, &c. L. Lindley, Nottingham 17th March 1418
Fulling machines. A. Roger, Paris 28th March 1572
Gas engines. P. Neil, London 25th June 3135
Hand-weaving devices. E. Wernicke, Berlin 17th April 1947
Jacquard apparatus. J. Chapman 24th March 1531
Looms for pile fabrics (improvements in). S. C. Lister and Josè Reixach, Bradford 26th May 2629
Looms for cloth. H. J. Haddon, Kensington. A communication 6th June 2814
Looms. G. H. Hodgson 12th March 1281
Looms. T. Hollingworth, Blackburn 12th March 1307
Looped fabrics. H. H. Lake, London 15th March 1393
Lubricators. J. Imray, London. 2nd June 2746
Looms. H. Yates, Manchester 19th March 1445
"Lap" forming machines. J. Walker and G. Beaumont, Dewsbury 21st March 1486
Looms. James Hodgson and Samuel Greenwood, Luddenden Foot 24th March 1534
Lace manufacture. W. Birks, Nottingham 26th June 3180
Looms. M. Sowden, Bradford 8th June 2861
Looms. R. H. Brandon, Paris (G. Crompton, Worcester, U. S. America) 25th July 3655
Manufacture of velvet, &c. J. Imray, London 8th March 1259
Oil-cans. G. A. J. Schott, Bradford; and Geo. Robinson, Sheffield 30th May 2690
Printing cloth. L. H. Philippi, Hamburg 26th June 3177
Piercing cards for Jacquard looms. Pierre Ambjorn, Paris 13th March 1344
Preparing machinery for flax, hemp, jute, &c. James Reynolds, Belfast 19th April 1999
Steam Boilers. H. Johnson, Sussex 30th May 2688
Spinning and twisting fibres. E. Morley, Halifax 12th March 1306
Stopping gear for looms, &c. W. H. Beck, London 21st March 1476
Stockings. A. P. Sheffield and A. W. Wills, Leicester 16th June 3006
Steam engines. H. J. Allison, Holborn 17th July 3499
Sewing machines. J. W. Post, New York 17th July 3506
Spinning machines. L. A. Groth, Finsbury Pavement 19th March 1435
Sectional warping. H. Yates, Manchester 19th March 1444
Severing double-piled fabrics. J. H. Johnson, Lincoln's Inn Fields 6th April 1742
Tulle of lace machines. C. D. Abel, Chancery Lane 30th June 3242
Vegetable fibrous material. L. A. Groth, Finsbury Pavement 19th March 1436
Winding yarn and thread. J. S. Brierley, S. H. Brierley, F. W. Hirst, and D. Hamen, Huddersfield 14th April 1905

Patents Sealed.

146	197	251	1831	2074	189	2084	2351
147	2144	2145	2218	175	344	533	755
763	1548	1155	1806	326	329	471	2088
209	296	363	527	801	2201	476	711
721	740	1915	606	653	783	1067	2273
2411	595	999	2510	2789			

Patents on which the Stamp Duty of £50 has been paid.

D. Marcon, Manchester, "Improvements in weaving and cutting pile fabrics 28th June 1880 2623
William Glover, Prestwich, "Looms for smallwares" 30th June 1880 2674
George H. Babcock, New Jersey; and S. Wilcox and N. W. Pratt, Brooklyn, "Steam boilers" 29th June 1880 2645
J. Heslewood, Leeds; and H. Webster, "Oil-cans" 1st July 1880 2691
T. and R. Holliday, Huddersfield, "Colours on cotton &c." 6th July 1880 2757
M. Bauer, Paris, "Regulator for spinning-engines" 7th July 1880 2785
H. Southwell, Rochdale, "Ring frame bobbins for throstle spinning" 20th July 1880 2986
J. Cresswell, Loughborough, "Knitted fabrics" 22nd July 1880 3010
J. H. Johnson, Lincoln's Inn Fields, "Sewing Machines." A communication 21st July 1880 2996
H. J. Haddan, Strand, "Improvements in circular knitting machines" 21st July 1880 3000
H. J. Haddan, Strand, "Improvements in machinery for spinning" 22nd July 1880 3015
G. D. Sykes, Huddersfield, "Improvements in the method of and apparatus for connecting warp to the warp beam employed in looms for weaving" 19th July 1880 2968
E. Wiseman, Luton, "Improvements in sewing machines" 31st July 1880 3161
Alfred Benn, Clayton, "Improvements in printing colours on fibrous materials whilst in silver" 22nd July 1880 3017
E. Crossley, L. J. Crossley, and W. Sutcliffe, Halifax, "Improvements in spinning, and in machinery or apparatus connected therewith" 26th July 1880 3076

Patents on which the Stamp Duty of £100 has been paid

Looms. G. Hodgson, J. Baoadley, and J. Lister, Bradford 31st July 1876 3062
Machine for opening cotton, wool, &c. W. R. Lake, London (R. Kitson, Lowell, U. S. America) 27th July 1876 3032
Treating wood and vegetable fibre to preserve from decay. E. T. Hughes, Chancery Lane 27th June 1876 2651

Copyright of Designs.

(Registered during July, 1883.)

Class VI., Carpets.

400,070 James Humphries and Sons, Kidderminster.
400,082 Henderson and Co., Durham.
400,095 Whitwell and Co., Kendal.
400,463 A. F. Stoddard and Co., Elderslie, N.B.
400,687-88 Wells and Le Mottee, Camberwell.
400,691 Coates, Pullar, and Co., Perth.
400,898 907 Heckmondwike Manufacturing Co., Limited, Yorkshire

Class XI., Furnitures.

400,096-97 R. Dalglish, Falconer, & Co., Manchester and Glasgow.
400,098 Thomas Hoyle and Sons, Limited, Manchester.
400,201-205 C. H. Traub and Co., Manchester.
400,509 Susman, Simon, and Co., Manchester.
400.602 Thomas Hoyle and Sons, Limited, Manchester.
400,867-68 Daniel Lee and Co., Manchester.
400,910-13 R. Dalglish, Falconer, and Co., Manchester and Glasgow.
400,601 Susman, Simon & Co., Manchester.
400,600 Daniel Lee and Co., Manchester.
401,020 Thomas Hoyle and Sons, Limited, Manchester.

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Contents.

Notices.

The Half-Yearly Subscription—payable in advance—including home postage, is 3s. 6d. Cheques and Post Office-Orders to be made payable to H. & R. T. Lord, 3, Gerrard Street.

The Publishers will be happy to receive intimations of New Inventions, Patents, &c.

The Publishers are open to receive from Designers, Original Designs of Carpets, Damasks, Tapestries, Linen, Cretonnes, &c., and such as are accepted will be published with the Designers name affixed. All Designs sent for approval must be 10 inches long by 7 inches wide for single page, and for double page, 16 inches by 10 inches, and must be accompanied by Postage Stamps sufficient to pay return Postage in case they are rejected.

Literary communications must, in all cases, be accompanied by the names and addresses of the writers, not necessarily for publication, but as evidence of authenticity.

Authors are requested to retain copies of their manuscripts; rejected manuscripts cannot be returned.

To prevent any misunderstanding, all Articles sent to the *Journal of Fabrics and Textile Industries* for publication, will be considered as offered *gratuitously* unless it is stated explicitly that remuneration is expected.

Readers are invited to forward items of interest to the Trades concerned.

The Proprietors will feel greatly obliged if any of their readers in making enquiries of, or opening accounts with Advertisers in this paper, will kindly mention the *Journal of Fabrics and Textile Industries* as the source from whence they obtained their information.

The New Patent Law.

THE Act to amend and consolidate the law relating to patents for inventions, which has been passed during the late session of Parliament, will come into operation on the 1st of January, 1884. It repeals wholly or in part twenty-three statutes, and by simplification of procedure and reduction of fees effects great changes. Application for letters patent must be accompanied by a declaration setting forth the claim of the applicant to be the inventor, and a provisional specification describing the nature of the invention, accompanied, if necessary, by drawings. The Comptroller refers the application to an examiner, and if passed by the latter, the Comptroller gives notice thereof to the applicant. If the examiner reports that the nature of the invention is not fairly described, or that the application is informal, the applicant will be required to amend his title, specification, or drawings. He can appeal from this decision to the law offices.

Formerly all applications were directly referred to the latter official without the intervention of an examiner.

The fee payable for provisional protection under the schedule attached to the bill is £1. Under the former Act the fee was £5.

Provisional protection of the invention is obtained by means of the foregoing procedure for twelve months from date of application. Hitherto the period has been six months. The extension of time is a concession of considerable importance, as it affords inventors an opportunity of perfecting their invention.

Within three months of the expiration of the provisional protection, the applicant must lodge his complete specification, otherwise the application shall be deemed to be abandoned. The fee payable at this stage is £3. The total cost of obtaining letters patent will therefore be £4. Formerly the entire fees (which included £5 on "Notice to Proceed" being given, and £10 on Warrant and Great Seal being applied for, both of which are abolished) amounted to £25.

At the end of four years from the date of application a certificate of renewal is granted on payment of £50, and a further fee of £100 is payable at the end of seven years. The patentee hereafter will therefore have the benefit of his invention for four years instead of three, before the £50 duty has to be paid. It is further enacted that these fees may be paid by annual increments, commencing with £10 at the end of the fourth, and ending with £20 at the end of the thirteenth year. The provision for payment of this heavy tax by easy instalments will be a great boon to poor inventors.

Under the 22nd clause of the bill it is provided that in default of the patentee granting licenses on reasonable terms, the Board of Trade may make an order requiring him to do so on such terms as they may direct.

Clause 24 provides that the Board of Trade shall have power to reduce the fees set forth in the schedule.

Clause 25 makes provision for extension of time of a patent by petition to Her Majesty in Council.

By Clause 26 the proceeding by *scire facias* to repeal a patent is abolished. Revocation will in future be obtainable on petition to the court. In Ireland this means the High Court of Justice.

A remedy in case of groundless threats of legal proceedings for alleged manufacture or sale of an invention is supplied under Clause 32, whereby the persons aggrieved may bring an action and recover damage (if any) provided no infringement can be proved.

Clause 39 enacts that the exhibition of an invention at an industrial or international exhibition shall not prejudice the right of the inventor or his legal representatives to apply for and obtain provisional protection.

Clause 41 transfers the Patent Museum to the charge of the Science and Art Department, who may require the patentee to furnish them with a model of his invention.

Clause 44 deals with improvements in instruments of war, and gives power to the Secretary of State, by certificate, to keep secret the nature of any such invention, when in his opinion it is in the interest of the public service to do so.

Clause 45 states that the provision of this Act regarding applications for patents shall have effect only in respect of applications made after the commencement of the Act. Patents granted before this time remain unaffected by the compulsory license clause, but as regards the other clauses the Act will extend to all patents granted before its commencement.

By this bill communications from abroad are abolished, and fraud is thereby prevented.

Applicants for patents may transact all their business with the Patent Office by post, and the various post-offices throughout the country are to keep on sale the stamped papers required in applications for patents. Each application for a patent is to be confined to one invention only.

Piron describes in the *Moniteur Industrielle* a new process for rendering paper or cloth waterproof, and at the same time protecting it from change. He employs an alcholic solution of the agreeable oil used to perfume Russia leather, and which is obtained by distilling white birch bark. The oil dissolves readily in alcohol, but is no longer soluble after it has once dried and become oxidized to a resin. The thin film of resin formed by impregnating the fabric, does not detract from its pliability in the least, and its aromatic odour protects it from insects. It protects quite well sea water, acids, and moderate changes of temperature.

Cashmere Shawls.

CASHMERE shawls, famed throughout the civilized world for their great beauty, are and have been, from time immemorial, made from "pushmeena," that is, the down or undercoat of the fleece of the Kashmir goat, which is a variety of that species of animal noted for its long, fine, silky hair. It is found chiefly on the slopes of mountains in Western Thibet, and also in Kashmir. The under fleece, called "pushm," is a soft, silky down, growing close to the skin, and under the usual coating of hair. That it is provided by nature as a protection for the animal against the intense cold of those mountain regions is proved by the fact, that, when it is removed to warmer climates, it no longer yields this down. The colour of the down depends on that of the coat of the animal; if it be white, then the pushm is white; if black, the pushm is dun coloured or dark brown. When the shearing takes place, and the pushm is separated from the coarse part, great care is exercised to prevent the mixing of the white with the brown; the former being much more valuable than the latter. The white realises from four to five "rupees" (eight to ten shillings) per "seer," (an Indian weight equal to two pounds).

The raw material is spun by hand into yarns of the necessary fineness; some are then dyed the colours required, but others are left for the production of fabrics in their natural shade. The next operation performed is that of sizing—this is accomplished by passing the yarn through rice water—in order to stiffen and solidify the delicate thread, and thus render it less liable to be injured by the friction of the loom and the manipulation which it must undergo in the course of manufacture. These shawls are usually woven in looms of the rudest and simplest construction; they are made in pairs, several persons being occupied in their fabrication for twelve months or more according to their size and quality. They are woven in separate pieces (the loom being too small to allow of the weaving of the whole), and are then joined so cleverly that only the most experienced critics can detect the joinings. The instruments used instead of shuttles are put through the open warp by the hand, there being as many of these instruments as there are colours employed in the fabric. When the weaving is finished, great care is taken not only in the manner of washing the shawl, but also in the kind of water used for the purpose. It is thought that their peculiar softness is derived from the special virtues of the water of the valley of Kashmir, preference being given to a certain part of the canal at Srinagar, near to some ruins, amidst which are some blocks of limestone; in one of these is a hole about 18 to 19 inches in diameter, and 12 inches in depth. The shawl is put into the hole, covered with water, and then trampled with the naked feet for about five minutes: it is then taken to the canal, and the man standing in the water and holding the shawl securely at one end, beats it upon the flat stones for another five minutes, dipping it into the water of the canal between every three or four strokes. It is then dried in the shade, for it is thought that exposure to the sun injures the colours. After the above process, white shawls are spread in the sun, and bleached by sprinkling water over them and by exposure; then the stamping, beating, and bleaching are repeated twice; sometimes soap is used in this second process, but it is not considered necessary, and is never employed for coloured shawls, lest the brilliancy of the dye should be impaired. The natural coloured shawls are treated in a similar manner, but do not require so much care. This manufacture is carried on under Government supervision, which levies a duty upon every pair woven, and punishes severely all who do not produce genuine goods. In most cases the manufacture is carried on in the homes of the people, but a few looms are set up in small factories. The weavers, owing to the crowded, ill-ventilated rooms in which they labour, are easily distinguished amongst the masses by their stunted growth and sickly appearance. Srinagar, although the chief, is not the only place in which these beautiful goods are made; recently the weaving of them has been introduced into Lucknow. At the beginning of this century there were thousands of Kashmir looms employed in the production of shawls, but in consequence of change of fashion, there are scarcely as many hundreds now at work; then, the natives carried on a large trade with England, and England with the Continent. The demands now are almost entirely for home use for State occasions. According to Mr. Baden Powell (Manufactures of the Punjaub) the natives distinguish the ornamentation of shawls by different names. The *hashia*, or border, is disposed along the whole length, and according as it is single, double, or triple, gives its particular denomination to the shawl. By the term *pala* is meant the whole of the embroidery along the two ends. The zanjir or chain runs above and below the principal mass of the *pala*. The *dhour*, or running ornament, is situated on the inside of the *hashia* and *zangir*, enveloping the whole field of the shawl. The *kunjbutha* is a corner ornament of a group of flowers. The *mattan* is the decorated part of the field or ground, and the *butha*, the generic term for flowers, is specifically applied to the cone ornament, which forms the most prominent feature of the *pala*. Sometimes there is only a single line of these cones; when there is a double row, the *butha* is called *dokad sekhad*, up to five, and *tukadar* above five. There is a special kind made for the Armenian market, called *Tara Armeni*. As there is, at present, so much freedom in styles of dress, and as shawls are much worn, it is to be hoped that our trade with the Kashmir valley may be revived, and that a manufacture of such artistic merit may not be allowed to die for want of patronage.

Aniline Dyes in Carpets and other Fabrics.

Out of some remarks made by Mr. Willis, in proposing a resolution to the town council of Kidderminster on the importation of Eastern carpets, during the prevalence of cholera in Egypt, has arisen a question, which, to manufacturers of coloured fabrics, and especially to those who use aniline dyes, and also to the public generally, should be of great interest. In proposing his resolution, Mr. Willis animadverted on the æsthetic qualities of Eastern carpets and rugs themselves, and out of this has arisen a controversy on the colouring of carpets and the dyes used in those produced by English manufacturers. A gentleman, writing to the papers, fastened on the admission that Oriental carpets are beautiful in colour—though, by the way, the assertion was not quite that—the actual reported words being, "He should be told . . . that they were beautiful in colouring, &c." "This is undeniable," is the retort, and it is asked, "Why are English-made carpets daily growing in disfavour?" The answer is that, owing to the use of aniline dyes, instead of the old-fashioned dyestuffs the colours are evanescent. On the one tide there is less trouble in dyeing, and a slightly greater profit so the manufacturer; on the other, there are the introduction into our clothes and furniture of a quantity of material often of a poisonous nature; the impoverishment of our pockets by the purchase of articles which have constantly to be replaced, and, finally, the annihilation of the good old name formerly accorded to English-made articles. Here, again, we have plenty of vigorous assertion, which, however, goes for very little. There are carpets of all qualities, just as there are buyers of varying wants and tastes; and, after all, manufacturers are, of necessity, in the habit of making what will sell. As for dyeing, aniline dyes, like all others, vary in stability; some are very fugitive, and long experience of the needs of the buyer has relegated these to particular uses where permanence is not of absolute necessity. Others, among which may be classed the aniline blues and blacks and artificial alizarine, are as permanent as any of the known old-fashioned dyes. Others, among which may be classed the diago scarlets now so much used, are far more permanent than the scarlets obtained from cochineal, &c., which they are replacing.

With regard to the accusation of poisonousness brought against them, it is absolutely untrue. No aniline dye is poisonous when legitimately used for dyeing fabrics, and only one has ever produced bad effects. This was an orange, chemically a nitro compound, which, having been loaded on to garments worn next the skin, caused considerable local irritation. This arose entirely from the unskilful application of the dye in excessive quantities. The same dye, though now but little used,

is perfectly harmless when properly applied. No other dye derived from aniline or from its homologues has ever produced ill consequences.

The aniline dyes have made a place for themselves, from which they are never likely to be expelled, and this is simply due to their own merits. They have been in use in various forms for upwards of five-and-twenty years, during which time they have been constantly improved in every particular, and numerous colours have been cast aside as useless wherever their defects have been such as to require such treatment; those that have been left and now remain in use are those that have been found worthy to survive on account of their intrinsic fastness and beauty.

Lastly, the ridiculous assertion constantly made that the aniline dyes are inartistic is a proof to what shifts detractors are pushed. What would be thought of a man who should complain that his ink wouldn't spell? The manufacturer of dyes is like the artists' colourman, he expects the dyer and weaver, like Mr. Belt, the sculptor, in a recent *cause célèbre*, to "confer whatever artistic merits they possess" upon his productions.

The Home Manufacture of Velvets.

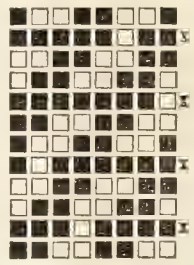
In our last issue, we inserted an article on the manufacture of velvets, the concluding paragraph of which has drawn the attention of one of the leading velvet manufacturing firms in the United Kingdom. This paragraph referred to the climatic influences which have to be taken into account in the dyeing part of the velvet production, and, undoubtedly, this has an influence in certain stages of the dyeing art, as applied not only to the velvet branch, but also to many other branches of the textile manufacture in this country. We were aware that a few firms were competing fairly well with the Continental manufacturers, and the paragraph in question referred to manufacturers in the United Kingdom as a body. We are pleased to insert the following particulars furnished us by Messrs. Lister and Co., of Bradford (the firm above mentioned), who are the leading manufacturers of velvets in this country. They write as follows: "We do not know if you are aware that a very important branch of business is carried on at Manningham Mills, in the manufacture of Continental silk velvets, nearly 1000 pieces per week are made in these mills, every yard of which is sold in direct competition with the Rhine and Crefeld velvet manufacturers. The competition is fully acknowledged on the part of these manufacturers, and not only is there a large trade done with all the largest wholesale silk houses, but a large foreign and American trade is done in these goods. The shade of black, which, at one time was thought could not be imitated in this country, is acknowledged to be quite equal to the foreign goods, and besides blacks, many thousands of pieces of colours in all the seasons' most fashionable shades are made annually. Besides velvet, there is a large trade in silk plushes for millinery, dress, and furniture purposes, and in silk furniture plush, which has been so popular for several years past, we are unrivalled, and are admitted to be more perfect in *shade* and *finish* than even the French or German manufacturers."

The Cork Exhibition and Irish Manufacturers.

A correspondent, writing to a leading newspaper, calls the attention of English tourists to the various goods of Irish manufacture to be seen at the Cork Exhibition, and says:—"English ignorance about Irish manufactures is well-nigh invincible," he then advises the tourists to try to dispel their ignorance, and continues—"Mahony's tweeds (made at Blarney, within a very few miles of Cork) are so prized in America, that one New York firm, Van Ingen, takes two-thirds of the output. Few Englishmen know anything of Blarney, except in connection with its too celebrated stone. The tweeds are bought in England, but west country firms get the credit of making them. The English tailor is not careful to show his customer the "four-leaved shamrock" trade-mark, which, to him, is the guarantee of an excellence very rare, even in the best English goods. It is the same with Clayton of Navan's tweeds, and with half a score more. The Englishman uses them "ignorantly in unbelief," having made up his mind that Ireland is a big cattle farm, where by some freak of man or nature it is possible to produce unequalled stout and whisky, and where for native use a little rough homespun (of which he sometimes condescends to import a sample for an ulster) is still made in continually diminishing quantities. It is time that such mischievously wrong ideas should come to an end; therefore, I say to all intending visitors, Do take in some three or four manufactures in your route. While in Dublin, see the woollen mills that Guinness has started just outside the city; see the Saggart paper mills; see White's glass works, and at his or Vodrey's, see the Belleek ware, not pretty nicknacks only, but household porcelain of all kinds. See these and recognise the fact that all parties in Ireland are trying, without regard to creed or politics, to give her manufactures a dead lift."

Silk Waste in the Hosiery, Wool and Cloth Industries.

In an article in the "Handbook of the Hosiery Industry," of the United States, published by Max Jaegerhuber, of New York, a review of which we gave last month, are some valuable hints on the utilisation of waste silk. The author says: "Now this important question arises, can our manufacturers of hosiery woollens derive profit from the silk waste in their own factories?" We think we must answer this question in the negative, with this statement, that the real value of silk waste has not yet been clearly recognised by any large number of hosiery and wool manufacturers. The waste known as flock silk, which has hitherto been used only in spinning coarse carpet yarns or upholstering materials, is really an exquisitely useful substance for ladies' or gentlemen's fashionable cloths, made by manufacturers of wool. Flock silk for this purpose, can be easily prepared for spinning by passing through the wood carders without any change, but pure and thick soapy water must be used. The yarns are woven on the wrong side, and are particularly applicable for winter dress goods, and must therefore be plentiful in supply—say: 2,440 yards to the lb. We give below a design which can be relied upon:



x denotes silk yarns. Design.

70 inches in the loom.
55 ,, finish.
2,100 threads in the warp.

SPUN YARNS FOR WARP AND WEFT.

A. Black, with 10 per cent. white,	6,100	yards per lb.
B. Olive yellow,	,,	,, ,,
C. 50 per cent. black and 50 per cent. white,	,,	,, ,,
D. Dark bottle blue,	,,	,, ,,
E. Underweft, white or coloured silk,	2,440	,, ,,

Warp:			Weft:			
A|A.	2	threads twist.	D|D|A.	1	thread twist	
B|B.	2	,, ,,	E.	1	,,	
A|A.	1	,, ,,	A|A|A.	2	,,	,,
A|C.	1	,, ,,	E.	1	,,	
B|B.	2	,, ,,	D|D|A.	2	,,	,,
			E.	1	,,	
8	,,	in the pattern.	A|A|A.	2	,,	,,
			E.	1	,,	
			D|D|A.	1	,,	,,
			12	,,		

Reed 15 dents in an inch, 2 threads. Rough finish. Close shearing.

After fulling, the last washing must be done without using any Fuller's earth. When dry, the carding should be done on the wrong side by rotating teasels, and the stuff must be occasionally beaten, so as to lift the silk fibres. The cloth will soon appear well covered and have a lustred surface—like velvet, soft to the touch and agreeable to the eye. For under-warps recovered silk waste is prepared like artificial wool. Mixed with pure wool, 30 to 40 per cent., very favourable effects are produced—the thread is greatly strengthened and the cost much reduced. If silk rags contain cotton or linen, they must be carbonized by sulphuric acid, and by dry treatment at 200 @ 250 deg. Fahr. This manipulation must be followed by washing with soda solution and large quantities of fresh water Pierced cocoons and those of dead silk worms may be made largely useful and extremely valuable in the manufacture of wool and hosiery. They are opened by common waste-openers, and being boiled some hours in thick soapy water, do not require subsequent washing. When dried the filaments must again pass the opener and the treatment be frequently repeated, until they have attained sufficient shortness for spinning when mixed with wool. The silk obtained from dead worms never will become white and lustrous, and therefore they are particularly adapted for under-warps, or for mixing with artificial wools in order to give them increased strength If any quantity of silk waste is entered in artificial wool goods, after dressing and dyeing by the usual method, the fabrics must necessarily be dressed in a dried state, until the silk fibres are sufficiently raised, and form, with the wool fibres, a uniform surface. The dyeing of these silks offers no difficulty, and in particular for the purpose of mixing with artificial wool large quantities of them can be dyed at lower prices by resorting to the method of wool dyeing. Silk waste or silk noils, though filled with naps, are not appropriate for any mixture with wool, but they can be advantageously manufactured into towels, kitchen or floor mats, and salt, sand, powder or grain sacks, and also into bed coverlets, horse blankets, and hundreds of other useful woven or knitted articles. Bed coverlets made by napless silk noils, and dressed in a dried state, will also be a useful material."

Improved Manufacture of Billiard Cloths.

The material, as it is generally manufactured for use as billiard cloths, is, to a great extent, liable to become damaged in the process of stretching upon the table. This liability to damage is consequent on the raw material, from which they are made, being of a very short fibre. As usually manufactured, they are made from woollen yarn that has been scribbled and mule spun. The yarns used have been mostly "single" or "two-folded," and, to a certain extent, uneven. During the past twelve months, an improved method of making these cloths has been in use; it is the invention of, and has been patented by, a Leeds firm. Instead of using the raw material of short fibres, they make the cloths from worsted or long fibred carded yarns, "six-fold," that is to say, the warp and weft are composed of six strands, forming one thread. These are twisted together by preference on a twisting frame, the operation of twisting taking place after each strand has been spun on a spinning frame. The weaving of the cloths is then effected in the ordinary manner. The advantages claimed by this process are—a greater evenness and strength, and, consequently, a less liability to tear or become otherwise damaged when stretched. At the same time it is capable of receiving the style of finish necessary for billiard cloths.

Nottingham is about to add to her fine University College, workshops and schools, in which a complete course of tuition in mechanical and electrical engineering will be given. The shops will be completely fitted with the necessary tools, appliances, and machinery, and the courses are to be arranged for both morning and evening classes, so as to reach, as far as possible, not only the young men of a better class—such as the sons of manufacturers qualifying themselves for a position in the commercial world, and others adopting engineering as a profession—but artizans as well. The fees for the evening classes are to be so low as to place the instruction within reach of every working man in Nottingham, and special instruction is to be given with a view of passing candidates in the examinations of the City and Guilds of London Institute in tools, mechanical engineering, and acemaking.

The New Bankruptcy Act.

A NOTICE in the *Gazette* reminds the world that the New Bankruptcy Act, which only received the Royal assent on the last day of the session, is already, in one important respect, in operation. More than one of its clauses take effect at once, as all concerned should bear in mind; but the subject of the notice to which we refer is, perhaps, the most important of these clauses It is what is known as the unclaimed funds and dividends clause. The provision has long been called for by all who are concerned in bankruptcy reform, the abuse which it strikes at having been one of the most serious and scandalous of the many which have arisen under the Act of 1869. Now that it is passed it makes a real commencement of the new system under which trustees in bankruptcy and liquidation are to be placed. Among the many opportunities they have hitherto had of plundering creditors, their opportunity in respect of unclaimed funds and dividends has been largely made use of, and the temptation to use it has in fact been one of the occasions of misconduct in the management of bankrupt estates by which the whole business has suffered. Estates have gone into liquidation, and nothing more has been heard of them, the entire funds, when questions were asked, being stated to be insufficient for costs, but no accounts being rendered to creditors. In other cases dividends have been declared, but declared in such a way, that creditors who had money to receive were not likely to hear of the declaration, or, if they heard, would find it most inconvenient to go to the place appointed to receive the money. In addition there always arises in a prolonged liquidation, an accumulation of unclaimed money, which belongs to creditors who have either died or left the country, or, where the single amounts are too small to be much worth claiming, though the aggregate may be valuable to the trustees from whom they are not claimed, and in whose hands they remain The unclaimed funds and dividends have thus been a source of illegitimate profit to the class of trnstees, and the desire to possess them has been one of the potent causes of the ardent competition for appointment in bankruptcies and liquidations, which would perhaps be unintelligible if the trustees who compete, and the solicitors who aid them, only received a fair reward for professional services. Hence, in part, the subsequent neglect and mismanagement, and the utter indifference shown to the interests of creditors. Accountants and lawyers have not only eaten up as much as they could by direct charges, but they have had the advantage of an unacknowledged reversion of the estate, which would be increased by every artifice employed to prolong the liquidation, and to delay the declaration of dividends. The final result is that, according to the calculations of the controllers in bankruptcy, there must now be several millions of "nobody's money"—the figure of four millions has been named—in the hands of the class of trustees who have hitherto preyed upon bankrupt estates; and it is in respect of this fund that the clause in the new Bankruptcy Act, to which attention is now called in the *Gazette*, will make a great difference. A total and complete change is made in the law, and, there can be little doubt, will also be made in the practice.—*The Times.*

The Irish Flax Crop.

The Flax Supply Association of Ireland has issued a return of the comparative acreage under flax in Ireland this year and last year, which has just been received from the Registrar General. The numbers of statute acres in the four provinces in 1882 and 1883 respectively, are as follows:—In 1882: Ulster, 111,480 acres; Leinster, 1,117; Connaught, 513; Munster, 374; total, 113,484. In 1883: Ulster, 94,353; Leinster, 1,078; Connaught, 295; Munster, 209; total, 95,925. The decrease of statute acres therefore is: Ulster, 17,127; Leinster, 39; Connaught, 218; Munster, 165. This shows a total decrease this year of 17,549 acres, as compared with the acreage under flax in Ireland last year, or upwards of 15 per cent. Some lots of this season's flax have appeared in Belfast markets, and sold at from 7s. 3d. to 8s. 9d. per stone. It was of good strength, but the quality was not high. There is, however, likely to be an early improvement in that respect.

A Silk Exhibition for Philadelphia.

The Philadelphia Silk Association, the most valuably earnest and enthusiastic Association in the interest of the silk industry, is thus early sounding the call for a grand Exhibition and Fair. in the spring of 1884. It is proposed that this shall far excel the previous one. The members have been personally active in encouraging and enlarging an industry which they have determined shall be, and ere very long, one of the leading ones of the country. Every variety of worm will be shown, and the process of feeding and caring for them, from the egg to the cocoon, will be illustrated. Growing trees will also be exhibited of the species best suited to be used as food for the silkworm. The hand reels of various kinds, the steam filature reelings, the Serrell automatic reeling, and all the processes of reeling, dyeing, throsting, twisting, winding, weaving, and designing will be shown, and the three distinct branches of the industry—agricultural, manufacturing, and the arts—will have seven instructive departments. The exhibition will be of the greatest value in progressing the industry of cultivation especially, for that is not only a profitable pursuit which girls and women can engage in, but a most interesting and pleasant one. The co-operation of every branch of silk manufacture is assured for the proposed exhibition, which will be made a school of vast interest, a repository such as shall develop the energy, progress, and good taste of American manufactures, and enlighten the minds of thousands.

The Weaving of Chenille and Five-Pile Fabrics.

In the means employed formerly for the combing and brushing up the "nap" on pile fabrics, it was usual for an attendant at the loom to do this work at certain stages of the weaving; but, by an improvement which was patented a few years ago, this slow process was, to a great extent, obviated, first by a rising motion being given to the reed, and second by mechanical arrangements being fixed to the loom, so that the combing and brushing of the chenille or fur was done whilst the loom was in motion. Recently, a further improvement has been patented, particulars of which are as follows:—At the back of the breast beam, and above the fabric, a bar is provided, on which is an arrangement projecting downwards, and acting as a comb, or on which a brush is fixed This brush or comb bar is carried by suitable arms which are connected to levers operated by cams, one of these levers being operated so as to move the brush or comb bar backwards beyond the fell of the fabric, the other lever being operated so as to cause the brush or comb bar to descend slightly and thereby cause the teeth or brush to enter amongst the "catcher" warps; springs being preferably employed to operate such levers in the reverse direction. By these means, when the lathe recedes from the fell of the fabric, the brush or comb bar is caused to follow it (sooner or later) a certain distance, and then to descend, after which the said brush or comb bar is caused to return towards the breast beam, and in its course it first brushes or combs the chenille or fur up into its proper position and then rises above the completed fabric to its forward position, where it is out of the way, and does not interfere with the weaver's attendance to the loom.

This improvement should prove a valuable one to manufacturers of chenille and pile fur fabrics, and it could undoubtedly be applied, with various modifications, to many other classes of goods.

Improvements in the Manufacture of Carpets.

Amongst the improvements in the manufacture of carpets, which have been patented during the past two or three years, is one, having for its object the saving of weft material, and, in some cases of time, as well as in the process of weaving velvet carpets with the jacquard Brussels and tapestry power looms, as compared with the better qualities generally produced, and in which an additional weft per wire or row of figure warps is introduced for the purpose of binding in tighter the figure warps, when the loops are cut to make into velvet. The specification just issued is a rather voluminous one, and gives a detailed description of the various improvements. By this invention, it is claimed that the figure warps can be well bound with using only the usual quantity of weft, viz.:—Two per wire or row of figure warps, and thus the saving is effected. If looped surface or uncut carpets are made on the looms, as arranged for the above velvets, they will have from the manner of weaving, a novel appearance, as if every other row of looms was woven with a larger wire, and the alternate row with a smaller wire. In some cases a larger and smaller size of wires may be used alternately to make the surface even or level, in others, the same size of wires will make the surface level. By another modification, looped surface carpets may be made to have the usual appearance of each row of loops being of equal size; but in common with the velvets and other descriptions of carpets, made according to this part of the invention, having the advantages of the figure warps being tighter bound and of a softer and more luxurious texture. The ordinary three shot Brussels or looped surface carpets may also be improved in appearance, by a further developement of the above modification as to the manner in which the rows of figure warps are bound, so as to produce rounder and fuller loops; as now made, the rows of loops are pinched up, and do not cover or join up together well. The texture would be of the usual stiff and hard character.

In carpets woven in the jacquard Brussels power loom, having the alternate appearance, this will afford artists in drawing patterns facility for new effects, as the lighter colours for tinting and edging objects may be confined to the smaller row of loops, and other colours required to work in larger masses may range freely over both sizes of loops. The invention also adapts power looms to bind the wires or rows of figure warps, whether for cutting for velvet or for leaving uncut for looped surface carpets, in such manner that the upper or surface wefts are brought close together, and assist each other in binding tighter between them the rows of figure warps, instead of each upper weft being separately bound apart from those preceding and following it; as is now the case, where only two wefts per wire are employed. To effect a saving of worsted or figure warps in all descriptions of carpets woven in the jacquard Brussels power looms, and also to afford artists, in drawing patterns, facilities for finer outlines, for getting in a new manner the dark shades for perspective shading, veining and other purposes, also for tinting or edging objects, and other novel effects. Worsted or figure warps are used of less thickness or bulk than usual for the several colours, and two or more colours or different shades of the same colour are raised, and, in some cases, two or more threads of the same colour, when working in different frames in each reed of the slay, to make up the quantity on the surface, whilst the lesser thickness or bulk will effect the saving out of the back of the carpet. This can be done in the process of stamping the cards for the jacquard part of the loom. Some portion of worsteds or figure warps may be of the ordinary bulk or sizes, and used in the usual manner. The patterns should be drawn upon design paper, arranged in the proportion of two to one, or thereabouts. The twos being for the lengthways of the pattern and carpet, and the ones being for the crossways, or from selvedge to selvedge.

Commercial Failures.

According to *Kemp's Mercantile Gazette*, the number of failures in England and Wales, gazetted during the four weeks ending Saturday, August 25th, was 729. The number in the corresponding four weeks of last year was 750, showing a decrease of 21, being a net decrease, in 1883, to date, of 203.

The failures were distributed amongst the following trades; and for comparison, we give the number in each, in the corresponding weeks in 1881 and 1882:—

	1883	1882	1881
Building Trades	91	77	99
Chemists and Druggists	5	4	11
Coal and Mining Trades	23	7	15
Corn and Cattle	15	19	19
Drapery Trades	58	57	58
Earthenware Trades	8	6	10
Farmers	19	24	59
Furniture and Upholstery Trades	13	9	9
Grocery and Provision Trades	133	178	184
Hardware and Metal Trades	30	34	13
Iron and Steel Trades	23	22	14
Jewellery and Fancy Trades	22	32	35
Leather and Coach Trades	43	38	34
Merchants, Brokers, and Agents	72	84	87
Printing and Stationery Trades	17	19	20
Wine, Spirit, and Beer Trades	63	75	94
Miscellaneous	94	65	69
Totals for England and Wales—	729	750	830
Scotland	72	63	54
Ireland	17	15	22
Totals for United Kingdom—	818	828	906

The number of bills of sale published in England and Wales for the four weeks ending Saturday, August 25th, was 889. The number in the corresponding four weeks of last year was 3,491, showing a decrease of 2,602, being a net decrease, in 1883, to date, of 23,991.

The number published in Ireland for the same four weeks was 79. The number in the corresponding four weeks of last year was 101, showing a decrease of 22, being a net increase in 1883, to date, of 176.

ORIGINAL DESIGNS.

The first plate offered to the notice of our readers shows a design for an Axminster Rug, which, if coloured in any of the prevailing fashionable styles, will produce a very effective pattern. Of course the design is suitable for any other kind of Rug. It has been drawn by Mr. R. T. Lord, 3, Gerrard Street, Halifax.

* * * *

On our second plate will be found four Diaper Patterns, of a very pleasing character, the work of Mr. J. L. Horner, 57, Dodworth Road, Barnsley. They are intended as designs for Dress Goods, for which purpose they are well adapted, as also for Velvet or Plush Goods.

* * * *

The third plate represents a design for Printed Cotton for Window Blinds, which has been drawn by Mr. R. T. Lord. We have no doubt this pattern will be found of service to manufacturers of other classes of fabrics.

* * * *

*** We beg to inform Manufacturers and others that adaptations of Designs, published in the "Journal of Fabrics and Textile Industries," can be made at the Office by experienced Designers, and that Original Designs can also be furnished at moderate charges.

MONTHLY TRADE REPORTS.

Wool.—At the London sales, which commenced on the 21st of last month, the attendance of buyers continued fair, and the competition for the better qualities was, on the whole, good, and prices ruled firm. For the lower sorts, the demand was slow, but prices showed no material alteration. In Scotland, business was of a dragging character, with no alteration in rates. In the Yorkshire districts, finer sorts of wools, especially botany, met with a fair sale at firm rates; the heavier classes were in slow demand during the first two weeks of the month, but an improvement took place, and more business was done during the latter part at firm rates. In the yarn and piece branches, a more hopeful feeling existed, and orders were given out at more remunerative prices.

Cotton.—The markets during the month varied considerably in tone, and business, on the whole, was not of a satisfactory nature. In the raw material sales were about on an average; but prices fluctuated. In yarn and cloth a moderate trade was done in some branches, but only a meague business passed in others. The demand for India was slow, although advices received from that country respecting the harvest were of a more re-assuring character. The export trade to China and Japan was also of a dragging nature, and no hopes were held out of much improvement at present. Where orders were given out for any description of yarn or cloth, they were generally of small account, and at prices that could be hardly remunerative.

Woollen.—The demand in this branch of textiles varied somewhat; in the Scotch districts there was a marked falling off in trades, although prices were well maintained. In the heavy woollen districts, the same want of animation, which has characterised the markets for some months past, still continues, and there seem to be no signs of an early improvement. In Leeds, a fair trade has been passing, the demand being principally for low-priced tweeds, meltons, unions and such like fabrics, and the better qualities of these also met with a fair business. The better class of worsteds, twills, diagonals, &c., have met with fair sales, and prices were well maintained. In Huddersfield, the markets were rather quiet; the makers of worsted coatings were fairly employed, and also some makers of certain classes of low-priced goods. Rates kept tolerably firm. In the export branches, a fair demand was experienced from the United States and Canada, but from the Continent the demand was of very small account.

Linen.—There was a falling off in the demand for linen goods, both for home and foreign consumption, and a quietness prevailed in nearly every branch. In flax and tow yarns no great sales were effected, and prices were, if anything, rather easier. The jute trade, both for the raw material and the manufactured article, kept fairly busy, and prices had, in consequence, a hardening tendency. Some very good fabrics in jute have been turned off the looms and have met with a fair sale; the prospect in this department is of a hopeful nature.

Lace.—The same languid feeling, which has pervaded the trade during the past three months, still exists. Perhaps there has been a slightly improved demand in one or two branches, but on the whole, no perceptible improvement has been experienced. The curtain branch was in a very unsatisfactory state, with very little sign of any change for the better, and the value of goods was very low. Silk goods were not in much request, and the various Maltese, Valenciennes, and such like laces were slow of sale.

Carpets.—The manufacturers of carpets were fairly employed during the month, and a hopeful feeling pervaded the market. In the tapestry branch, a decided improvement had taken place, and prices were a shade more remunerative. In the Brussels department, the looms were, as a rule, kept fully employed, and an increased demand is expected during the next two or three months. The rug branch was moderately active. The business, passing in Scotch and such like carpets was only fair, and at prices hardly remunerative. On the whole, a better outlook existed in all branches of the trade.

The Associated Chambers of Commerce.

The official programme of the Association of Chambers of Commerce, which holds its meeeing at Derby, on the 2nd and 3rd of October next, has been issued. There are twenty-eight subjects put down from the different Chambers, which have formulated resolutions upon them. The questions to be dealt with include the Suez Canal, the Land Laws, Telegraphic and Telephonic Communication, Railway Fares, City Dues on Coal and Wine, Minister of Commerce, the Decimal System, County Courts Jurisdiction, House of Commons Procedure, and Progress of Bills in Parliament. In reference to promotion of British trade with India, Heckmondwike moves, "That in the present depressed condition of British trade and commerce, it appears desirable for this country to do all that is possible to give increased vigour to our trade with India, by developing the agricultural resources of that country, by improving the means of internal communication, by establishing local banks, and by applying British capital to remunerative public works, and that the Executive Council be requested to communicate this resolution to the Government."

Factory Employment in India.

It has been understood for some time that the severe and unwholesome conditions of factory employment in India were engaging the attention of the Indian Government. An official examination of those conditions was made some months ago, and they were found to be such as to demand intervention. No daily limitation of ten hours is known; Sunday brings no break, and children of seven years of age seem to be employed without any check. Precautions of safety are largely disregarded, and the sanitary conditions are in character. Under these circumstances it has been decided to introduce a system of inspection similar to the English one, though doubtless with modification. Steam factories have had their principal development thus far in Bombay, and some of the cotton factories in that Presidency rival those of Lancashire in size. The first essay of inspection is to be made there, and Mr. J. E. Jones, who has had twelve years' experience as an inspector of an English factory district, goes out at once to organize the system.

12TH SEPTEMBER, 1883.

DESIGNED BY R. T. LORD.

PRINTED WINDOW BLIND.

DESIGNED BY R. T. LORD

AXMINSTER RUG.

12TH SEPTEMBER, 1883

DESIGNED BY J. L. HORNER.

DRESS GOODS.

New Patterns for Cloths for the Winter Season, 1884.

IT is always wise, before commencing a new season, to review the work done in the past, to note the success which has been attained in catering for the public, and to count on future achievements by past experience and new information gained. We have, during the past few seasons, given a varied selection of designs for worsted, woollen, and mixed goods, which we are pleased to note have been appreciated by manufacturers as a body; many of these patterns have been woven as given, others have been taken as suggestions, and improved upon, and, on the whole, they have met with much success in the market. Our efforts in this direction have not been unrewarded; on the contrary, the circulation of the Journal amongst the cloth, as well as amongst other branches of textiles, has gradually increased. In the next issue of the Journal we shall offer to our subscribers the first collection of designs for the winter of 1884 We have had, through the kindness of some of the most prominent merchants, the opportunity and privilege of examining numerous samples of worsted and woollen cloths prepared specially for the winter of 1884, and such as they consider will meet with the greatest demand. Whilst the texture and make of the cloths are such as have been most called for during the past season, the style has been, and will be, varied to satisfy the demand for change, in order to ensure a fair sale for the producer.

We have noticed particularly that the *square* or *check* has been in great request in all branches of the textile trade, for both ladies' and gentlemen's wear, and for the rulers of fashion, as well as for the people. Designers have kept this fact in their mind's eye, and have expended much thought and skill in order to produce neat, modest and most beautiful checks (such as are certain to be generally appreciated) of different dimensions, varying from $\frac{1}{8}$ inch to 3 inches, but of a very subdued and quiet character; though so quiet the threads will be found, upon examination, to possess all the qualities necessary to make a pleasing aad saleable cloth. They combine strength, clearness of colour, and quality. Some of the very largest checks are so modified in the arrangement of colour that, when viewed at a distance of a few feet, they appear no longer to be checks, but to have dissolved into a delightful mixture. This effect can only be acquired by the most assiduous study, practice and perseverance on the part of the *designer*. It requires constant care and incessant watching of the results and novelties produced by the crossing of the warp and weft. In some of the patterns we have inspected, both in woollen and worsted materials, there is a considerable amount of silk used in warp and weft. Dotted, small stripes, checks and white speckled (pure snow white) effects were predominant, and we should recommend those of our readers, whom it may concern, to have amongst their collection a few silk mixtures. Worsteds, plain and fancy, for coatings and complete suits, will, no doubt, have a great demand. Although this branch of the textile trade has had such an unlimited and successful run, some buyers predict for it a much brighter career, but the fabric must be of a more *lustrous* character, without having that greasy shining appearance which has marked many of the worsteds made during the past season. In the woollen clothing trade, the feeling is for a better and finer class of cloth (the low fancy woollens have had a most exceptional run in some districts) and this demand for a superior article will give increased scope to the manufacturer to bring out more novelty in design and colour. We are glad to notice that the working population is asking for sounder, finer, and brighter-looking material, and we trust that this desire may tend to create a livelier and more remunerative state of things to the woollen manufacturer, who has, for some time, suffered so much from competition in low goods.

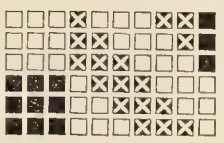
Prize Competition.

Particulars of the September prize competition for designs for worsted, woollen, cotton, or mixed goods, suitable for ladies' or gentlemen's wear, may be had, by addressing Publishers of *The Journal of Fabrics and Textile Industries*, Halifax.

ORIGINAL DESIGNS.

Trouserings.

No. 96.



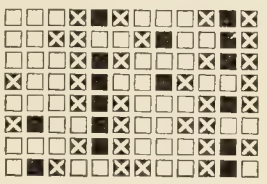
Design.

Warp: 1 Silk Twist, 60's counts.
6 Navy Blue, 2/48 worsted.
3 Bronze Green, 2/48 worsted.

10 ends.

Weft: Black, Brown, or Navy Blue worsted, 1/24's.
80 threads per inch.
80 picks per inch.
16's reed.
5 threads in a dent.
66 inches wide in loom.
56 inches when finished.

No. 97.

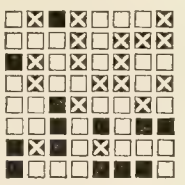


Design.

Warp: 1 Light Blue, 2/36 worsted.
1 Brown Drab, 2/36 worsted.
1 Crimson, 2/36 worsted.
Weft: Black throughout, 1/18 worsted.
The Brown Drab to be in places marked ▣

72 threads per inch.
72 picks per inch.
12's reed.
6 threads in a dent.
66 inches wide in loom.
56 inches when finished.

No. 98.



Design.

Warp: 1 Black and Crimson worsted twist, 2/36.
1 Dark Brown worsted twist, 2/36.
1 Black and Green worsted twist, 2/36.
5 Black worsted twist, 2/36.

8

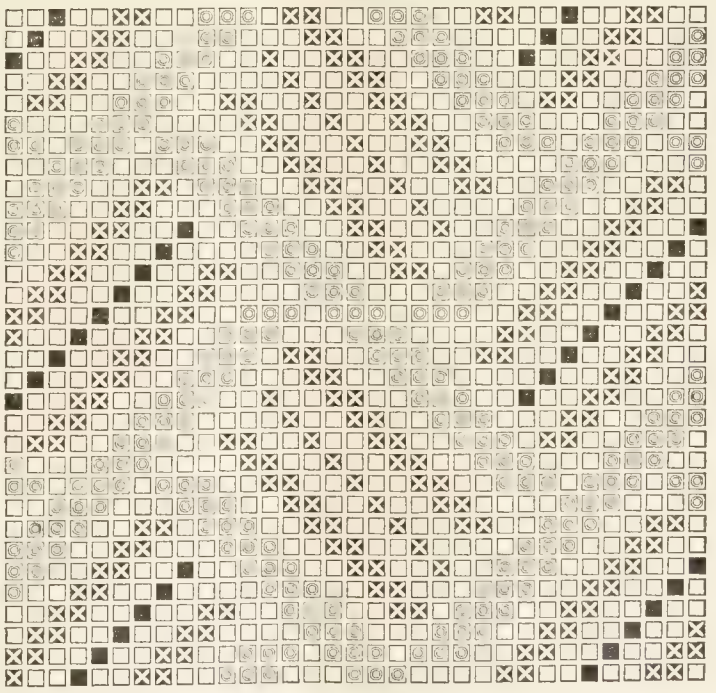
Weft: 1 Black and Blue worsted twist, 2/36.
1 Bronze and Green worsted twist, 1/20.
1 Black and Blue worsted twist, 2/36.
5 Black worsted twist, 1/20.

8

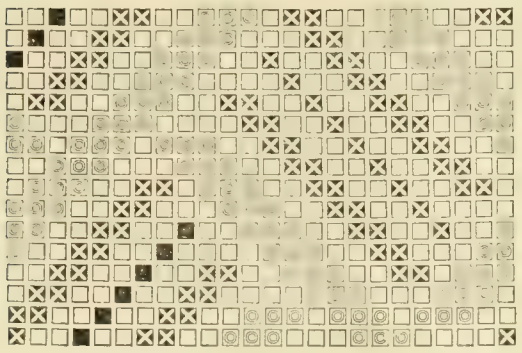
64 threads per inch.
64 picks per inch.
16's reed.
4 threads in a dent.
66 inches wide in loom.
56 inches when finished.

Worsteds or Tweeds.

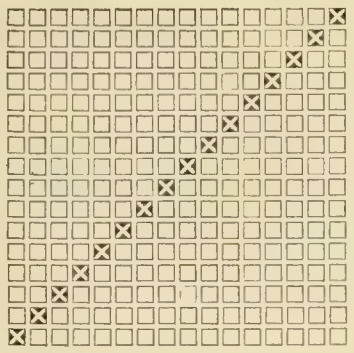
No. 99.



Design.



Pegging Plan.



Draft.

This pattern is suitable for either worsted or tweed fabrics. If made up for a worsted, it would be well to put it in a fine reed. Particulars as follows :—

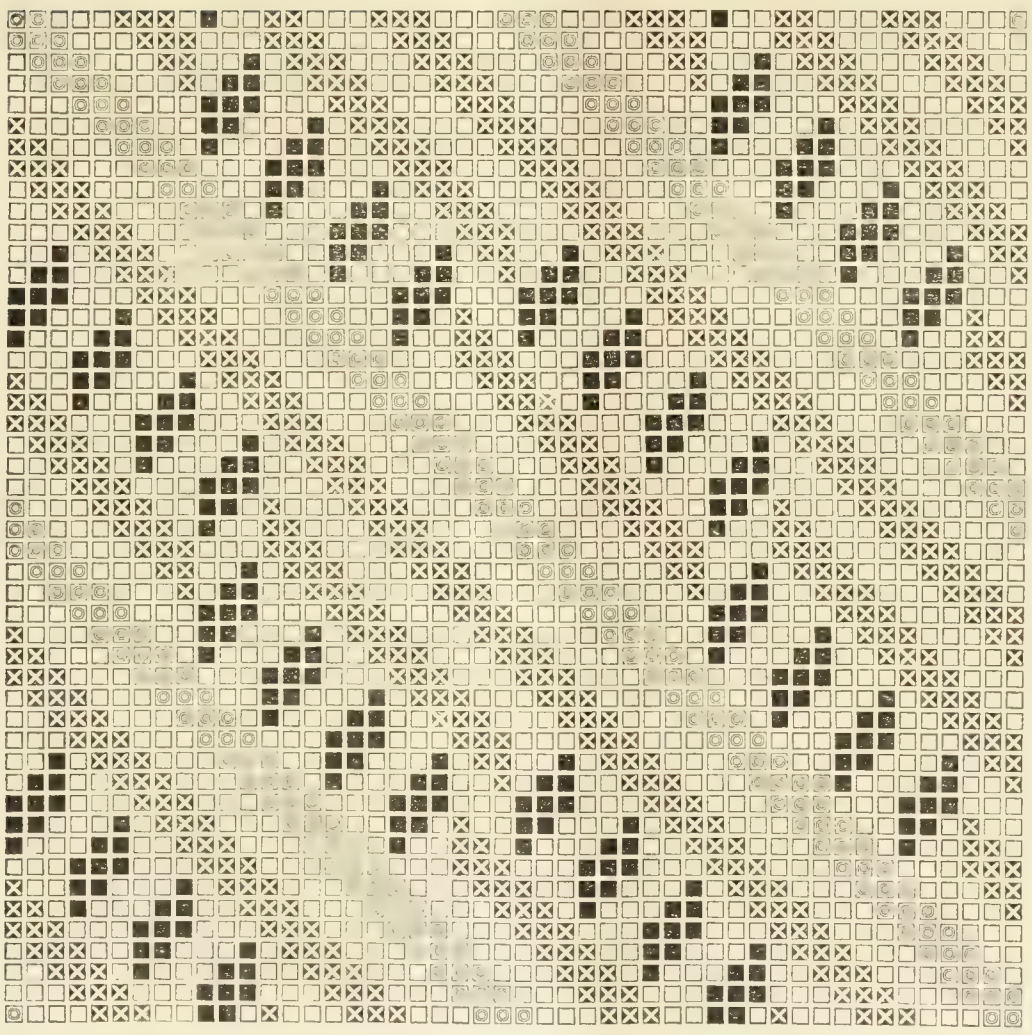
26/4 reed, Scotch count.
52 porters per yard.
58 shots or picks per inch.

If it be used for tweeds, work as follows :—

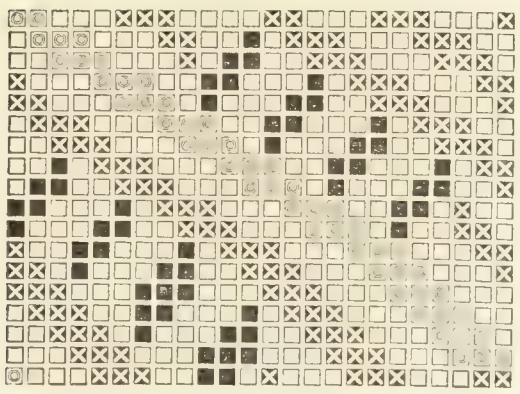
18/4 reed.
36 porters.
39 shots or picks.

Warp : 2 Black, 2 Drab } 8. 30 cuts.
1 Black, 30 cuts.
1 Black and Orange, 50 and 50.
Weft the same as warp.

No. 100.



Design.

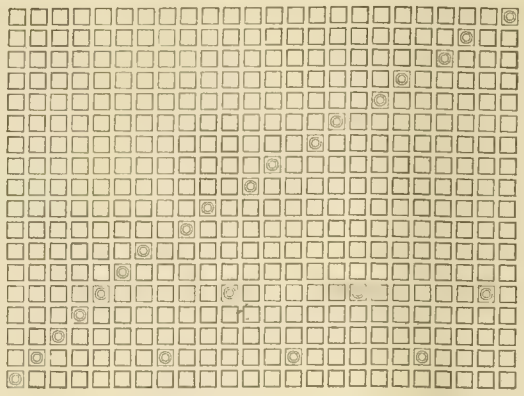


Pegging Plan.

This design is also suitable for worsteds or tweeds. If for worsted, work as follows :—

24/4 reed, Scotch count.
48 porters per yard.
52 shots or picks per inch.

Warp and weft 2 ply Black, 30 cuts.



Draft.

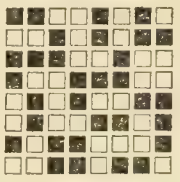
In working tweeds proceed as follows :—

24/3 reed.
36 porters per yard.
38 shots or picks per inch.

Warp and weft :
3 Brown Mixture, 30 cuts.
3 Dark Grey Mixture, 30 cuts.

Spring and Summer Suitings for 1884.

No. 102.



Design.

Warp and Weft :

2 Light Lavender.	2 Lavender.
2 Black.	6 Black.
2 Light Blue.	2 Lavender.
2 Black.	6 Black.
2 Light Lavender.	2 Light Blue.
2 Black.	2 Black.
2 Light Blue.	2 Light Blue.
2 Black.	2 Black.
2 Yellow Drab.	2 Lavender.
6 Black.	2 Black
2 Yellow Drab.	2 Lavender.
6 Black.	2 Black.
32	Total 64 ends.

100 porties + 38 ends per portie.
14's reed.
4 in a split.
58 picks or 60 picks.

Length of yarn—36 skeins, or equal to 8216 yds. per lb.

No. 103.

Design

Warp :

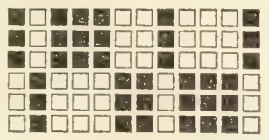
1 end	A	3	threads	twisted	together	3	twines	per inch.
1 ,,	B	2	,,	,,	,,	15	,,	,,
2 ends	C	2	,,	,,	,,	15	,,	,,
1 end	D	2	,,	,,	,,	15	,,	,,
1 ,,	B	2	,,	,,	,,	15	,,	,,
2 ends	C	2	,,	,,	,,	15	,,	,,

Weft : 2 picks E 3 threads twisted together 3 twines per inch.
1 pick D 2 ,, ,, ,, 15 ,, ,,
1 ,, C 2 ,, ,, ,, 15 ,, ,,

A 3 Lively and Bright colours
B 2 White
C 2 Blue Medium
D 2 Pale Green or Blue
E 3 other Bright colours
} Each 600 yards per ounce.

65 porties and 10 ends.
36 picks.
9's reed.
4 ends in a split.

No. 104.



Design.

Warp :

1 end	White, single	
3 ends	Black, self twist	
1 end	Bright and Lively, single	} Each 36 skeins when twisted.
1 ,,	Light Blue, single	
1 ,,	White, single	
3 ends	Black, self twist	
1 end	Bright and Lively, single	
1 ,,	Pale Green, single	

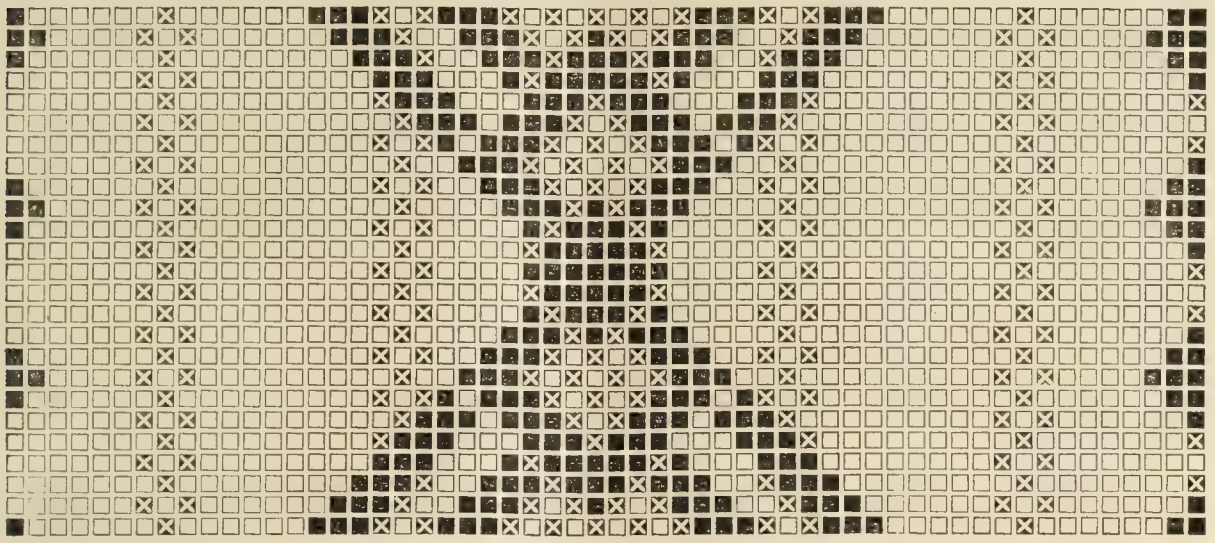
12 ends.

Weft : 1 pick 3 threads twisted, 36 skeins twisted.
2 picks White, single, 36 skeins single.
3 picks Black and White, twisted, 36 skeins twisted.

6 picks.

100 porties + 38 ends.
66 picks.
11's reed.
6 in a split, or 22 reeds, 3 in a split.

No. 105.



Design.

Shirting, &c.

No. 101 is a 56-end pattern, with warp as follows :—

6 threads White 3 Blue.
8 threads White 3 Red.
4 threads White 7 Blue.
4 threads White 3 Red.
8 threads White 3 Blue.
6 threads White 1 Red.

In cutting the cards, cut ⊠. □ to be plain ground.

Huddersfield Exhibition.

In our last issue we gave descriptions of the greater part of the larger class of exhibits at Huddersfield, we, therefore, in the present number, propose to describe the lighter class.

Mr. S. CROSSLEY, FOLLY HALL, HUDDERSFIELD, has on view an admirable specimen of a working pattern loom, which is fitted up with all the necessary requisites for producing correct patterns of woollen, worsted and other cloths. It is highly finished, and in actual working should prove of great value to the user. In addition, Mr. Crossley shows a number of shuttles of various kinds for woollen, worsted and cotton goods, and also a quantity of fittings for shuttles.

Mr. GEORGE HARLING, TEMPLE MAKER, LOCKWOOD, HUDDERSFIELD, exhibits an assortment of self-acting temples for woollen, worsted and cotton goods, including cloths of various kinds, carpets, tapestries, stuffs, linens, &c. They consist of Harling's patent union star and segment barrel, single star, and double star temples, all of which are for stretching the fabric by the selvedge only. He also shows Hardaker's patent conical segment barrel, patent double barrel, and ordinary parallel barrel temples. These stretch by the selvedge and part of the cloth. They are all fitted with mountings suitable for any make of looms, and are provided with shuttle-trap escapements, horizontal and vertical vibrating motions. The whole of the above temples are of a superior class of workmanship.

Mr. G. S. TOMLINSON, MACHINIST, HUDDERSFIELD, who is a large maker of finishing machinery, shows his damping machine, which we have already described in a previous number; and in addition exhibits machines of minor importance, including shearing and wringing machines, and a hydraulic pump.

Mr. ALFRED YATES, BLACKWALL WORKS, HALIFAX, exhibits the unique steam-engine, the "Velomotor," to which we have directed the attention of our readers on two previous occasions. It is a matter of astonishment to us that a motor of such Liliputian dimensions should be capable of performing such an amount of work as it does. The patentee has studied three important principles in designing the engine—economy in the first cost, economy in the space occupied, and economy in the use of steam. These principles he has certainly attained, the price being less, undoubtedly, than that of any other well-finished motor in the market; it occupies a smaller space than the majority of motors, and requires much less steam. In most instances the machinery can be driven direct, the engine, in many cases, being lower in price than the necessary gearing and connections of other methods. The motors are guaranteed to be of first class workmanship, and the materials of the finest quality, the shafts being of steel, and the bearings of phosphor bronze. They are also guaranteed to drive machinery equal to any ordinary engine of the same size, and with less expenditure of steam. The space occupied by a 3 h.p. motor is only 3 feet 6 inches by 1 foot 8 inches. In sizes above 5 h.p. they are constructed with two or more cylinders, which, of course, renders the engine greatly superior and ensures very steady driving powers. As an example of the efficiency of these engines, the maker will be glad to show a 3-horse velomotor driving four heavy iron turning and boring lathes, two drilling machines, one of them a 36-inch double-geared; a 48 by 30-inch planing machine, besides shafting, grindstone, &c. This work has been carried on, with satisfaction, for three years, at an expense, during that time, of 5s. only for repairs, and at a cost never exceeding 2s. 6d. per week, of 54 hours, for fuel and water. In addition to the velomotor, Mr. Yates exhibits a drill suitable for a great variety of machinist's work. It is of first-class workmanship, and is shown simply as a specimen of the class of goods produced at his works in Halifax. The drills are made in various sizes for either light or very heavy purposes.

Mr. WM. RAMSDEN, JACQUARD MACHINIST, SHELLEY, near HUDDERSFIELD, has a stand on which is fixed a jacquard machine, of a very neat make, a close examination of which will prove, to the initiated, that it is well adapted for the weaving of the class of goods (viz.: cloth, &c.) for which purpose it has been manufactured. It is of first-class workmanship, and must bring credit to the maker. He also exhibits a witch engine, in quality and make, &c., in every respect equal to the above. He also shows some excellent samples of jacquard and witch cards, adapted to all classes of weaving. These cards are made from material of the best quality and are guaranteed to stand wear and tear equally as well as those of any other maker. Some of the looms at work in the exhibition are fitted up with cards, &c., of Mr. Ramsden's manufacture.

Mr. ELLIOTT HALLAS, NEW STREET, HUDDERSFIELD, has a large stand, on which is placed a large variety of leather goods and general mill furnishings. There is a number of single and double beltings, including a 16-inch main driving belt, wood pegged, cemented and stitched, and finished in the best possible manner. He also exhibits a section of the largest double belt running in the Huddersfield district, and which has been manufactured at his works. The specimens also include cotton beltings of various makes, roller leathers of various kinds, patent vulcanized fibre for shuttle beds, pickers, shuttles, and a large assortment of general mill furnishings, including a really fine display of fire brigade appliances. The whole of this exhibit is worthy of the highest commendation. Mr. Hallas has fitted up a part of the shafting in the exhibition with his leather belting, to the entire satisfaction of the committee.

Messrs. JARMAIN & SON, TURNBRIDGE WORKS, HUDDERSFIELD, who are carbonisers of wool and cloth, show a large number and variety of samples of wool, &c., which either contain, or have contained, burrs, seeds, or other vegetable matter, and which, by a chemical process, essentially their own, they cleanse from any foreign matter that, in any degree, deteriorates the value of the raw material, or the manufactured article. In the case are samples of greasy wools, and wools containing burrs, &c., side by side with similar wools which have been chemically treated to clean and remove form them foreign substances. This part of the process has been done most satisfactorily, judging by the various specimens shown. A number of felt hat bodies, made from burry wools and noils, are also in the case, and prove that this firm is able to produce results from material which, at one time, would have been consigned to the dust heap as being of no value whatever. The same processes are used by Messrs. Jarmain & Son on either the raw material or on the cloth, to remove cotton or other vegetable matter, this it does most effectually; at the same time it in no degree injures the fibre of the wool, or effects its power of taking delicate dyes.

Messrs. JOHN WHITE & SONS, PARK ROAD LEATHER WORKS, BINGLEY, YORKSHIRE, have a very good display of leather beltings, mechanical leathers of various kinds, and general mill furnishings. Their specimens of oak-tanned beltings are worthy of special notice, and are guaranteed to be of the best material and workmanship. They are united by hydraulic power, and sewn with copper wire by a patent process, and, in working, are capable of transmitting any amount of power required. On the stand is a good selection of roller leathers, for hard and soft drawing, &c.; and combing leathers in various sizes for silk, worsted, flax, jute, &c. We may add that Messrs. White and Sons have fitted up a quantity of the shafting in the exhibition with their leather belting, which is transmitting the power required in a very satisfactory manner.

Mr. A. PYRAH, OSWALD STREET, THORNTON ROAD, BRADFORD, shows admirable specimens of cards, in various qualities and sizes. They include hard blue and other makes of circular box, jacquard, dobby, and shedding motion cards. The boards from which they are manufactured are made in Bradford, and the cards cut by special machinery, at the rate of nearly 50,000 per hour. In addition to the above, the case contains some paper coated spindles of a good make.

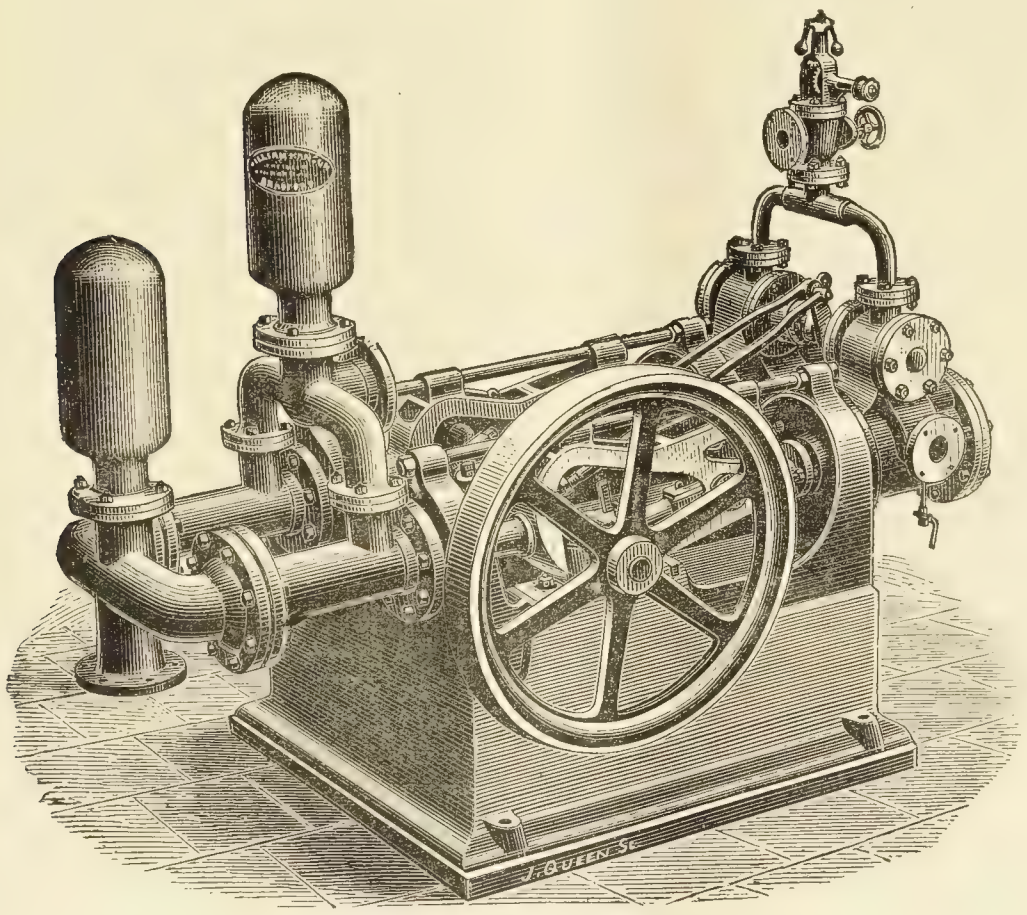
Messrs. JOHN INGHAM & SONS, CROFT HEAD WORKS, THORNTON, near BRADFORD, make a capital display of shuttles, pickers, springs, pikes, pots, &c., for the spinning and weaving of various kinds of fibres. The case contains nearly one hundred specimens of the above necessaries in the textile trades, the whole of which reflect the greatest credit upon the makers, being of really superior workmanship, solidity, and quality of material. The shuttles include those in use for looms built by the following well known firms :—Hutchinson, Hollingworth and Co.; Pearson and Spurr; Lee and Crabtree; Schofield and Kirk; Taylor and Sons; Leach; G. Hodgson; Sowdon and Sons, &c., and they can be seen at work in the Exhibition, on the looms exhibited by G. Hodgson; Sowdon and Sons; and Hutchinson, Hollingworth and Co. For carpet weaving there are several specimens (both large and small) for Brussels, rugs, tapestry, Scotch, &c.; and for flax and jute there are samples for cops. In connection with the

worsted coating branch, there is a variety for Hattersley's ; Hodgson's ; Leemings, and Sowden's ; and also for Hutchinson, Hollingworth and Co.'s American looms ; and others are working as stated above. For the dress trade (both plain and fancy), reps, damasks, linen, &c., there are numerous examples. Clapham's patent double bobbin shuttle finds a place, as does another similar shuttle for weaving two colours of yarn together. For French tubes there is one specimen. In addition to the above there are nine different kinds of shuttle pegs for weaving spools, pirns, cops, and tubes ; and there are all kinds of fittings for woollen shuttles, &c. The list of pickers is likewise a long one, including, as it does, Pearson and Spurr's patent woollen picker, and Hutchinson, Hollingworth and Co.'s drop box picker—five different kinds of plain and drop box for woollen, eight kinds for worsted coating weaving, numerous examples for linen, flax, cotton, &c. —six different leather pickers, and two buffalo for under pick looms. There is also a specimen of Almond's patent picker. It may be mentioned that the larger shuttles are made of crabtree, beech, persimon wood, cornell wood, and the small ones of boxwood. They are all made on the most approved principle, and with all the latest improvements. They vary in size, from the large and massive cloth shuttle, twenty inches long, to the small hand-loom shuttle of ten inches long.

MACHINERY, TOOLS, &c.

Hanson's Double Action Steam Pump.

Amongst the displays of machinery at the Oldham Exhibition, is a double action steam pump, which has been made specially for the Albion Spinning Company, of Oldham, by Mr. William Hanson, Quebec Works, Thornton Road, Bradford. The pump is, in respect to finish and efficiency, of the first rank, and its adaptability to pumping purposes of all kinds is worthy of note. As will be seen from illustration, it is made



horizontal and very compact, yet the working parts are firm, being fixed to a cast iron bed, and arranged in such a manner that in case of repairs, &c , any part may be reached with a minimum of difficulty. The glands are made either of brass or lined with that metal, and the suction valves are of such a capacity that they ensure satisfactory results from the pumping operations. As stated above, the pump is a double action one, and contains rams 8½ inches in diameter ; two buckets of 12 inches diameter ; and both 12 inches stroke. The cylinders are very large, 17 inches diameter, so that when in use as a fire engine, for which purpose it is specially adapted, and the steam is low in the boiler, a good pressure of water can be discharged from the hydrants. A pressure of 20 lbs. of steam will give 70 lbs. of water per square inch, a result satisfactory to a high degree, at the same time the supply will be as regular and steady as if from the town's mains. It has many improvements, all tending to make its efficiency more marked, both as a fire engine appliance, and as a pump for ordinary purposes. Visitors to the exhibition, especially those interested in this class of mechanism, should make a point of inspecting it in actual operation. It is pumping a large volume of water hourly, which is sent up in the form of a fountain, and it has greatly interested large numbers of people who have witnessed it.

Lancaster's Mule Throstle.

Amongst the displays of cotton spinning machinery at the Oldham Exhibition, opened last month, is a rather novel "Throstle," which is being introduced by Mr. Wm. Lancaster, machinist, of Accrington. This invention, named the "Mule Throstle," has already caused a great deal of interest amongst the cotton spinners of Lancashire, and those from many other districts, as it is claimed by the patentee to have certain advantages which give it a foremost rank amongst the improvements in textile machinery, and a decided advantage over existing apparatus in ordinary use amongst cotton spinners generally. It spins "weft" as well as "twist" on the bare spindle, turning off cops exactly similar to mule cops. The advantages of this system are obvious, when it is taken into account that the machine stands in less than one-half the space that the same number of mule spindles occupies, and that it produces a better quality and a larger quantity of yarn, owing to the fact that the spinning is almost continuous. The power necessary for running is less than that usually required. The danger to life, and the risk of fire through friction is reduced to a minimum. In construction, this "Mule Throstle" does not differ in any manner from other throstles. Its motions are few, and they have nothing of a complex character about them. It has two large tin rollers, inclined roller stands, &c. It is most substantially and well built, and of a pleasing design. Mr. Lancaster informs us that the machine in finish, &c., has not been got up specially for exhibition purposes, but is such as is generally turned out of his works at Accrington. In actual work, the yarns can be twined off either hard or soft, according to the requirements, as on any other throstle or ring-spinner. The throstle has been patented in most countries in which cotton spinning is carried on.

ODDS AND ENDS.

Ten years ago, an Italian manufacturer, Mr. Aducci, made a speciality of working silk waste and the silk of "Bombyx Mylitta," "Bombyx Perny" into tissues and coverlets, the latter as a substitute for woollen blankets. He produces a sort of quilt, made of coarse silk, which the medical faculty of Italy begin to recommend as a substitute for blankets.

* * * *

A Permanent Exhibition of American goods is about to be opened at Maracaibo, Venezuela. The United States Minister at Caracas and Consul at Maracaibo, have secured from the Venezuelan Government the privilege of entering one sample each of machines, apparatus, and instruments pertaining to trades, agriculture, arts, and commerce, free of duty. These samples will be placed in the Permanent Exhibition rooms.

* * * *

It has been decided by the General Committee of the Fisheries Exhibition to hand over the buildings to the Executive of three successive exhibitions to be held in 1884, 1885, and 1886. An exhibition of the silk industry is talked of for the first. The next will be devoted to music, and it is hoped that in the last year a general colonial exhibition may be held. Each of these will probably pay one-fourth the cost of the buildings, and thus, with such a large deduction from their expenditure, the Executive of the present Exhibition ought to have a very large surplus.

* * * *

The almost imperishable Tussah silk of China and India, is the product of an insect generically different from our silkworm, nor is its food the same. It closely resembles the silk insect, *Attacus ricini*, which feeds on the leaves of the castor oil plant. The Tussah silkworm, *Attacus atlas*, finds its food in the leaves of the terminalia and the zisyphus jujube. The fibre, prized for its remarkable durability, has not so brilliant a lustre as our silk, and its colour is dark grey, not so blue, but nearly as dark as "steel mixed." In order that it may enter into the composition of our variety of silk fabrics, it must be bleached, and to bleach it without injury to the fibre is found to be no easy task.

* * * *

A project has recently been set on foot in Austria to establish a great central wool market either at Brünn or Vienna, and it appears likely that the former place will be definitely settled on. The existing wool markets of Austria have long shown that they required centralisation, for the scarcity of stocks at each has compelled Austrian manufacturers to look abroad for the supply of their requirements, and year by year the trade in raw wool in Austria has grown more infinitesimal. Now it is hoped that by the establishment of one such central market as it is proposed to create, a sufficiently large assortment of various kinds of wools may be gathered together to cover all the needs of buyers at home.

* * * * *

A new scheme for the discovery of fibres has just been proposed by the Revenue and Agricultural Department of the Government of India, in connection with the International Exhibition, to be opened at Calcutta, next December. It is intended to allow experimental trials in the extraction of fibres of all kinds, to be made at Calcutta during the ensuing rains, and the Government has decided to do all in its power to render the experiments as successful as possible. With this object in view, it will provide stems and other fibrous portions of fibre-bearing plants or trees, and, as far as possible, motive power. Those who desire to perform experimental trials are expected to register their names at the office of the Revenue and Agricultural Department. The plants suggested for trial are to be found in India.

NOTICE TO ADVERTISERS.

Advertisements will be inserted at the following rates; (in all cases prepaid): *Twenty words, One Shilling; Sixpence* for each additional *Twelve words* or part of *Twelve.* The address being counted as part of the Advertisement.

Displayed Advertisements according to arrangement.

Wanted.

SITUATION desired by advertiser as SECRETARY, ASSISTANT-MANAGER, or other position of trust. Good correspondent in French and German, and accustomed to travel. Twelve years' engineering experience, and competent inspector of machinery. Well known over the north of England. Address L. R., care of John Dale and Co., 17, Bridge Street, Bradford.

To be Let or Sold.

TO BE LET, desirable and commodious PREMISES, recently used as a Silk Mill, containing ground floor office, two storerooms, two ditto over same, large and light workroom, 167 ft. by 29 ft., room over same, blacksmith's shop, 50 ft. by 16 ft.; engine house, 26 ft. by 17 ft., in which are two six nominal h.p. horizontal engines coupled together, and Howard patent boiler; room over same, chimney stack, 130 ft. high; frontage to road, 33 ft. 8 in.; piece of garden attached. Further particulars apply Thomas Walker, Oldbury Works, Tewkesbury.

TO BE SOLD by Private Contract, as a going concern, all those valuable COTTON MILL and PREMISES, known as Busk Old Mill, situate at Busk, in Chadderton, near Oldham, in the county of Lancaster, with the reservoirs, steam engines, boiler, mill gearing, steam and water piping thereto belonging, together with the machinery contained therein; consisting of 15 double carding engines, and the necessary preparation to follow: the whole to be sold subject to a mortgage. For further particulars, or order to view, apply to Mr. J. H. Noble, auctioneer and valuer, 21, Union Street, Oldham.

THE GAZETTE.

Liquidations by Arrangement or Composition.

Whitaker B., Batley, Yorkshire, rag and shoddy merchant.
Hollins W. and W. Bostock, Oxford Street, Manchester, sewing cotton manufacturer.
Pedley C. and A., Meadow Mill, Congleton, Cheshire, silk throwsters.
Maddick Jos., and John Maddick, Cannon Street, Manchester, cotton manufacturers.

Dividends.

Findlay J., 13, Rood Lane, London, merchant and commission agent; first and final dividend of 1s. in the pound, at the office of Messrs. Cooper Brothers and Co., 14, George Street, Mansion House.
Rudyard W. H., 3, Clegg Street, Macclesfield, Cheshire, trimming manufacturer; a first and final dividend of 2s. 6d. in the pound, at 76, Derby Street, Macclesfield.
Sharp M., Victoria Mills, Bowling, Bradford, Yorkshire, worsted spinner and manufacturer; a first and final dividend, of 7s. 1d. in the pound, at Victoria Chambers, Bank Street, Bradford.
Bernacchi D., Albion Street, Leicester, silk yarn agent; a first and final dividend of 1s. 3d. in the pound, at Selborne Buildings, Millstone Lane, Leicester.
Charnock J., Victoria Mills, Bowling, Bradford, Yorkshire, worsted spinner and manufacturer; a first and final divident of 3s. 3d. in the pound, at Victoria Chambers, Bank Street, Bradford.
Norman F., and D. Crombie, 8, Edmund Place, Aldersgate Street, E.C., East India agents; a first dividend of 6s. in the pound, at the offices of Messrs. Boyes and Child, 42, Poultry, London.

Dissolutions of Partnership.

Rhodes and Taylor, Longwood, near Huddersfield, scribblers and spinners.
Almond J. and Co., Blackburn, cotton manufacturers.
Almond J., and W. H. Almond, Greenlow Mill, Greenbank, Blackburn, cotton manufacturers.
Bentley W. B., and G. W. Roberts 7A, Goldsmith Street, City, silk agents.
Evans E., and D. Evans, 24, Watling Street, trimming manufacturers.
Lonsdale W. H., J. Dickinson, and R. Tootell, Blackburn, Lancashire, cloth manufacturers.
Robinson J., and W. Taylor, Brockholes, near Huddersfield, Yorkshire, manufacturers.
Wood M., and W. H. Taylor, Failsworth, Lancashire, hat manufacturers.
Williams L. G., R. Williams, and C. Ekin, Hounslow, Middlesex, dye manufacturers.
Atkins J., T. Atkins, and U. Atkins, Hinckley and Leicester, hosiery manufacturers.
Brayshay W., W. Dockray, W. Harrison, and A. Hoyle, Leeds, Yorkshire, carpet manufacturers.
Shillito R. H., G. Shillito, and D. Crawshaw, Dewsbury Moor, Dewsbury, Yorkshire, blanket manufacturers, &c.
Wheater W., J. R Tankard, and J. Holdsworth, Alma Works, Sticker Lane, Bowling, Bradford, Yorkshire, worsted spinners, &c.

Bills of Sale.

	£	s.	d.	
Brooke C., 3, Springfield Place, Dewsbury, dyer	73	3	6	
Cameron Isabella, Albert Terrace, Blaydon-on-Tyne, dressmaker	30	0	0	
Constantinidi G. N., Liverpool, cotton merchant	350	0	0	
Eskrigge J., and H. Eskrigge, Farnworth, cotton spinners, mortgage	4,000	0	0	
Hodson F. E., Chorlton-on-Medlock, cotton broker,	sett. in tst. for wife			
Pickering H. A., 2, Village Road, Oxton, cotton broker	255	0	0	&c.
Walsh E., J. Walsh, G. Walsh, and C. Walsh Orchard Mill, Over Darwen, cotton spinners and manufacturers	further charge.			
Ainley R., and A. Stephenson, Morley, Batley, (of property at the Crank Mill, Morley) cloth finishers, mortgage, &c.	3,500	0	0	
Garnett J., 33, South Street, Huddersfield, waste dealer	150	0	0	
McArdle, J., 4, St. Paul's Square, Liverpool, cotton dealer	1,494	12	11	
Nadan J. T. and J. Ryan, frilling manufacturers, balance of purchase money	1,550	0	0	
Baxter R. M., 2, Whetley Grove, Manningham, Bradford, pattern dyer	100	0	0	&c.
Higginbottom J., Dorset House, Heaton Chapel, cotton merchant	650	0	0	
Hellier T. S., 20, Gauden Road, Clapham, frilling manufacturer	332	10	0	
Jeremy D., Hafod, Swansea, Galmorgan, flannel manufacturer	35	0	0	
Harrison T., New Street, Sedbergh, worsted manufacturer, not ex.	400	0	0	indy
Jarratt G. J.. Unsworth, near Bury, check shirting manufacturer, &c.	490	0	0	&c.
Johnson W., Croham Road, South Croydon, wool merchant	30	0	0	
Wood J., Rutland Street, Hulme, Manchester, pattern card maker	50	0	0	

PATENTS.

Applications for Letters Patent.

Belting (woven). F. Reddaway, Pendleton	16th Aug. 3977
Combing machines (Nobles). H. Priestman, F. H. Adcock, J. Brown, and J. Copley, all of Bradford	9th Aug. 3871
Colouring matters (extractive). J. Longmore, Liverpool	15th Aug. 3956
Carding machine. W. Gawthorp, J. Reddihough, and S. Wade, Bradford	28th Aug. 4143
Dobbie machines for weaving. P. Burns, Gillies, and R. G. McCrum, Milford	3rd Aug. 3802
Dyeing cotton fabrics. T. A. Gatty, Accrington	11th Aug. 3896
Elastic trimming. G. Dean, Derby	28th Aug. 4142
Furnaces for carbonizing woollen rags, W. Brierley, Halifax. A communication	31st July 3744
Fibres for upholstery, &c. P. M. Justice, Chancery Lane. A communication	14th Aug. 3932
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Grants of Provisional Protection for Six Months.

3372	3373	3389	3400	3419	3422	3426	3439
3442	3456	3476	3491	3498	3520	3523	3527
3530	3538	3549	3550	3130	3351	3567	3569
3587	3591	3617	3630	3638	3641	3643	3649
3659	3662	3675	3689	3710	3722	3730	3743
3744	2135	3796	3801	3802	3808	4145	

(All of 1883.)

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Bleaching kiers. C. L. Jackson and James Westley, Bolton 14th June 2958
Brussels and tapestry carpets and other loop pile fabrics. J. W. Walker, Kidderminster 28th April 2150
Combing cotton and other fibres. J. Thompson and T. Baker, Manchester 26th April 2109
Carpets and other fabrics. T. T. Radford, Kidderminster 11th July 3419
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Fasteners for samples of fabrics, &c. M. Bauer, Paris 5th April 1719
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Felt hat apparatus. J. Eaton, Stockport 19th April 1976
Fibrous material for packing axle-boxes. S. Pitt, Sutton 21st Aug. 4044
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Looms. T. Hanson, Bradford 12th July 3439
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Machines for printing fabrics. W. Mather, Manchester 19th April 1978
Machines for wringing and mangling fabrics, J. Kenyon, J. Barnes, and R. W. Kenyon, Accrington 30th June 3253
Machines for silk, felt, &c., hats. M. Haslam, Stockport 3rd April 1669
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Process and solution for textile materials. W. R. Lake, London 12th April 1866
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Sewing machinery. A. G. Brookes, Chancery Lane 19th June 3028
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Shag or pile fabrics. H. J. Haddon, Kensington 12th April 1852
Stiffening for fustians, velvets, cords, &c. J. Sellars, Manchester 2nd July 3263
Spinning machinery. B. A. Dobson, Bolton 2nd May 2232
Tassels for umbrellas, &c. M. H. Harris, London 3rd April 1664
Textiles, &c., rendered uninflammable. F. H. De Stasicki, Cannon Street 6th April 1744
Treating textile materials with liquids or gases. H. J. Haddon, Kensington 30th April 2181
Tying in warps. J. P. Binns, Halifax 25th April 2098
Table trucks for weighing bales, &c. T. McEntegart, Liverpool 28th June 3213

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691	735	774	2184	2552	225	948	1049
2484	1018	1212	2554	820	906	950	983
1006	1257	1964	954	955	2629	1009	1259
2356	2679	2814	2846	1070	1388	1393	1130
1148	1344	1418	1900	(All of 1883.)			

Patents on which the Stamp Duty of £50 has been paid.

J. A. Hopkinson, and J. Hopkinson, Huddersfield, "Flue or tube for steam boilers." 4th Aug., 1880 3184
D. Gaussen, Gloucestershire, "India-rubber compounds for floor coverings," &c. 19th Aug., 1880 3377
W. Goode, Nottingham, "Machines for bleaching, scouring," &c. 6th Aug., 1880 3215
W. Haworth, Burnley, "Compound for washing, bleaching," &c. 6th Aug., 1880 3221
John Bradley, Lowell, Mass., "Improvements in circular knitting machines." 9th Aug., 1880 3245
E. Hird, Bolton-le-Moors, "Apparatus for spinning and doubling cotton," &c. 9th Aug , 1880 3243
J. H. Johnson, Lincoln's Inn Fields, "Machinery for combing." 24th Aug , 1880 3422
F. Cuthlan, Cardiff, "Improvements in sewing machines." 11th Aug., 1880 3281
M. H. Pearson, Leeds, "Improvements in sewing machines." 12th Aug., 1880 3294
W. Knowles, Bolton-le-Moors, "Yarn winding machine" 17th Aug., 1880 3331
J. Boyd, and T. A. Boyd, Lanark, "Machine for winding, doubling, and twisting yarn," &c. 20th Aug , 1880 3386
H. Greenwood, Leeds, "Improvements in sewing machines." 19th Aug., 1880 3360
J. Jefferson, C. Jefferson, L. Jefferson, and M. Jefferson, Bradford, "Machine for washing fibres and fabrics." 20th Aug., 1880 3387
A. M. Clark, "Looms for double pile fabrics." A communication. 22nd Aug., 1883 4075

Patents on which the Stamp Duty of £100 has been paid

H. Ainley, Huddersfield, "Improvement in apparatus for weaving." 14th Aug., 1880 3200

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(Registered during August, 1883 *)*

Class VI., Carpets.

401,844 Potter Lewis, Kidderminster.
401,981-83 W. Storey and T. Storey, Lancaster.
402,079-80 E. Clarke and Sons, London.
402,345 W. Green and Sons, Kidderminster.
402,499-502 T. W. Worth, Stourport.
402,515 P. Lewis, Kidderminster.
402,691 The Heckmondwike Manufacturing Co. (Limited), Yorks.
402,737 Shepherd and Beveridge, Kirkcaldy..

Class XI., Furnitures.

401,297-98 R. Dalglish, Falconer, and Co., Manchester and Glasgow
401,413 D. Sassoon and Co., Manchester.
401,488 E. Potter and Co., Manchester and Dinting.
401,493 S. and C. Nordlinger, Manchester.
401,725 R. Dalglish, Falconer, and Co., Manchester and Glasgow.
401,763-64 Thomas Hoyle and Sons, Limited, Manchester.
401,765-67 Daniel Lee and Co., Manchester.
401,829 S. and C. Nordlinger, Manchester.
401,893-95 S. and F. Sternberg, Manchester.
402,086 The Rosendale Printing Co., Manchester.
402,089 D. Lee and Co., Manchester.
402,379 R. Dalglish, Falconer, and Co., Manchester.
402,519-22 The Rosendale Printing Co., Manchester.
402,523-30 Salis Schwabe and Co., Manchester.
402,631 S. and C. Nordlinger, Manchester.
402,632-34 Melland and Coward, Manchester.
402,733-34 R. Dalglish, Falconer, and Co., Manchester and Glasgow.
402,737 Shepherd and Beveridge, Kirkcaldy.
402,965-67 The Rosendale Printing Co., Manchester.

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Contents.

Notices.

The Half-Yearly Subscription—payable in advance—including home postage, is 3s. 6d. Cheques and Post Office-Orders to be made payable to H. & R. T. Lord, 3, Gerrard Street, Halifax.

The Publishers will be happy to receive intimations of New Inventions, Patents, &c.

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To prevent any misunderstanding, all Articles sent to the *Journal of Fabrics and Textile Industries* for publication will be considered as offered *gratuitously*, unless it is stated explicitly that remuneration is expected.

Readers are invited to forward items of interest to the Trades concerned.

The Proprietors will feel greatly obliged if any of their readers, in making enquiries of, or opening accounts with Advertisers in this paper, will kindly mention the *Journal of Fabrics and Textile Industries* as the source from whence they obtained their information

The Associated Chambers of Commerce.

THE autumnal meeting of the Associated Chambers of Commerce was held at Derby a few days ago, under the presidency of Mr. C. J. Monk, M.P. A large nunber of delegates from various parts of the United Kingdom attended. The President congratulated the Chambers, and the commercial community at large, on the considerable progress that had been made in legislation with respect to certain measures, which had for many years past occupied the anxious attention of the Association and the respective Chambers of Commerce. He dwelt especially on the great benefits that would undoubtedly accrue through the passing of the Bankruptcy Act, although it was not all the Chambers could have wished. He also referred to the passing of the Patents Bill as being a measure of inestimable value to the poorer class of inventors, as well as to the public generally. The Suez Canal question then occupied the attention of the delegates for some time, three resolutions being put before the meeting relating to the management, &c., of the Canal, the following motion being eventually carried :—

"That on account of our interests in the East, it is most important that a second canal should be provided between the Mediterranean and the Red Sea, to be made by the consent of the Khedive of Egypt, in which British interests shall be adequately represented."

Some subjects of minor importance were then discussed and afterwards, a resolution, introduced by the Leicester Chamber, relating to the decimal system of weights and measures, was carried. The motion was as follows:—

"That in the opinion of this association the establishment of a complete decimal system of weights and measures would confer a great boon upon the commercial classes of this country, and it is highly desirable that the teaching of such a system should be introduced into all public elementary schools.

"That this association recommends the metric system of weights and measures now in use by nearly every Continental nation, and a decimal currency, based upon, and as nearly as possible approaching, our present coinage; and requests the Executive Council to bring this resolution before Her Majesty's Government."

The Promotion of British Trade with India was introduced by one of the Heckmondwike delegates, and Mr. T. F. Firth of that town, speaking in favour of the motion given below, said "it was evident to his mind that the development of the railway system of India as it had proceeded—and it had proceeded at the rate of from 700 to 800 miles per annum—had produced an improvement in the trade of India. There was nothing which could so promote the good of a country, the development of its resources, and the increase of its trade as the construction of railways. The Under-Secretary for India had most emphatically shown that he desired to have a push given to those who were inert in this matter, and it was for the Chambers of Commerce to express themselves in no unmistakeable language as to the value of the development of the railway system in India. He had also clearly proved that we must not increase the indebtedness of India to England. That indebtedness was now from fifteen to seventeen millions a year, and upon that we lost something like three millions. But what would be the effect of constructing 2,000 miles of railway instead of 700 or 800 miles per annum? Instead of India having to pay, say from fifteen to seventeen millions per annum, the account would be balanced, and there would no longer be the call for those drafts on the Indian Treasury which had brought down the exchange. Gentlemen, who were competent to form an opinion, said that the immediate effect of the passing of such a resolution would be a jump in the exchange. He did not believe that they, as commercial men, had any subject of greater importance to them than this. They bestowed great labour on such places as Servia and Roumania, but here was a country, with which they could do a trade, beside which that of those two countries was exceedingly small."

The following resolution was then carried unanimously :—

"That in the present depressed condition of British trade and commerce, it appears desirable for this country to do all that is possible to give increased vigour to our trade with India by developing the agricultural resources of that country, by improving the means of internal communication, by encouraging the establishment of local banks, and by application of British capital to remunerative public works."

Mr. Swire Smith, of Keighley, then proposed the following resolution relating to the appointment of a Minister of Commerce, which was carried :—

"That as another session of Parliament has passed without effect being given to the twice repeated votes in favour of the establishment of an efficient Ministry of Commerce, this association desires again to express the conviction that no arrangement will be considered satisfactory by the commercial and industrial community, unless the desired department be intrusted with the functions and possesses the powers indicated in the President's letter, of November 22nd, 1882, to the Prime Minister, and that the Executive Council be urged to attain this long-desired and much-needed appointment by every means in their power."

After a discussion on a motion in favour of "Inquiry commissions in cases of large fires and the consequent destruction of property," which motion was carried, Sir J. Behrens proposed a resolution of the Bradford Chamber on Partnerships Bills, which was adopted unanimously. He said this question had been before the Associated Chambers almost ever since its establishment. After considering the present state of affairs, and the opinions of those best acquainted with Parliamentary matters, it had been considered desirable that the resolution should read as follows :—

"That the Executive Council be requested to communicate to the President of the Board of Trade the unanimous desire of this Association that Government should introduce a bill for the consolidation and amendment of the laws of partnership in the next session of Parliament, and that failing a favourable reply to this communication, the Executive Council be requested to reintroduce bills for the codification of the existing law of partnership, for the compulsory registration of all partnerships, and for the legal regulation of limited liability in private partnerships."

Subjects of minor importance occupied the remainder of the sittings, which closed with the usual votes of thanks.

Yarns for Fabrics having a Crimped Surface.

In the manufacture of fabrics having a crimped or crinkled surface, similar to the well-known Canton or China crapes, an improved method of preparing the yarns in the doubling process has been patented In China and Japan, silk, cotton and wool are all used in the manufacture of these fabrics, both separately and mixed together, according to the style and quality of material to be produced. This process applies specially to the *weft* yarns —the warps used being prepared in the ordinary manner. Generally, the weft has a tendency, when highly twisted in its preparation, to kink and snarl during the weaving of the fabric. To remedy this, a size made from vegetable products is put into the doubled yarns, either before, or during the doubling process, and into single yarns before the extra twist is put in, or in either case during the spinning of the yarn. It is also found practicable to size both the double and single weft yarns after they have been highly twisted, in which case they must be stretched or held in tension till the size dries, or it will, in the weaving of the cloth, cause very uneven places in the material. The size employed to carry out the invention is preferably made from such sea-weed as is soluble in water—the weed known as gum-weed having been proved by experience to answer the purpose most satisfactorily. The size, when dry, possesses the requisite amount of flexibility, and at the same time sufficiently agglutinates the fibres of the yarn to set the twist, and yet allows the weft yarn to run freely from the shuttle. When the cloth is woven, it has the appearance of a smooth-faced fabric, and remains so until the size is washed out of the weft either in the bleaching, dyeing, or other process; then the twist in the weft yarns is liberated and shows a tendency to untwist, but this is prevented by each thread being held firmly by the warp and weft yarns which surround it, and it can only kink and snarl between each thread of the warp, and so, by drawing the warp ends closer together, cause the piece to become narrower, and the cloth to assume the desired crimped or crinkled appearance peculiar to Canton or China crapes.

A Caution to Manufacturers, Merchants, &c.

Nothing is more common than to see the word "patent" impressed upon various goods. In most cases nothing at all is meant by it, the term being simply intended to serve as a finish or decoration, which is mostly done in colour that washes out and does not injure the material—in many instances it precludes the necessity of using either an expensive or inexpensive ticket or tab. No one is deceived in any way by such a distinguishing mark, nor does it serve any end beyond the one mentioned. At the beginning of the new year, however, the new Patent and Trade Marks Act comes into operation, one of the enumerated "offences" against which is the use of unauthorized titles, or distinctive marks upon goods, and one clause provides that any one who sells an article with the word "patent" or "registered" stamped or impressed thereon, when the article has been neither registered nor patented, shall be liable to a penalty not exceeding £5, the fine being summarily recoverable before any magistrate. Manufacturers, warehousemen, and drapers will do well to bear this in mind.

Messrs. John White and Sons, Park Road Tannery, Bingley, Yorkshire, have been awarded a Bronze Medal, at the Amsterdam Exhibition, for the excellence of their exhibits, consisting of belting and other mechanical leathers.

The Fulling of Woollen Cloths.

IN the fulling of woollen cloths, Spitzla, in his manual, gives some valuable advice to manufacturers. He says: "Fulling is a process applied to certain fabrics composed in part, or entirely, of animal fibres. It shrinks, thickens, and makes the goods more compact, but the fibres must be of a peculiar nature or construction to possess the necessary properties which make this result both possible and permanent. This property is found in the fine merino wools in the highest degree. Some hairs have nearly as little of it as vegetable fibres. The nearer the wool approaches hair in nature and construction, the less of the property will it possess. The artificial means employed to produce the result above mentioned, are heat, moisture, and friction. With these alone it is possible to full some woollen fabrics, but nearly all show better results when some soap is used with the moisture; short staple will not endure the friction produced by the machinery necessary, without soap. The machinery which produces the friction and retains the heat generated by it, and the soap, by means of which the goods are at once moistened and lubricated, are the two principal factors employed.

"The machines are considered under the head Fulling Mills; the kind of soap in its proper place. The application and preparations of the process are alone to be considered here. The application of the soap is an important feature—too much makes the goods clammy; too little, spongy. The soap being too strong will, with the heat of the mill, not only affect colours, but the nature of the fibres. It must be gradually and evenly put upon the goods; this is best done by any means which will allow a small stream of it to be directed upon the goods while in motion. The quantity of soap used must be governed by the time the goods are in the mill, the stock in goods, and the density of fabric required. When goods composed of short stock (like shoddy) have too little soap in the mill, they will surely chafe, a loss and damage that cannot afterwards be fully repaired. If the soap is not rich enough for the amount of friction and time required, chafing is a sure consequence. If there is much free grease, or dirt or dye in the goods, the soap must overcome it or be overcome and prove little better than water.

"In rotary mills of every kind there must be a contrivance to jam the goods together lengthwise, else the goods will not shrink in length, and goods not shrunk in length in the fulling mill, will do so in sponging, and in the garment. Almost every one has had experience with goods of this kind, and the consequent annoyances. The contrivance is most commonly applied in the form of a trap-box, called "clappers," "crimping box," "jam," and many other terms by different fullers. The goods running continuously in wrinkles, unless frequently taken out, opened and stretched, will, after a while, full more in some parts than others, notably those least exposed to the surrounding atmosphere; this is the cause of mill streaks, wrinkles, clouds, and rows. There are also other causes for each of these, but when similar effects are caused by uneven appliance of soap, running of colours, excessive grease, dirt, or flocks, or by uneven yarn, they are really different, and should not be designated by the above appellations. The time required by fulling can be regulated in part by the frequency of this cooling, opening, or stretching, by the amount of cold air admitted into the mill and by the pressure applied.

"Opinions vary much in regard to the time required to produce the results, largely due to the fact that different circumstances have been differently observed and accounted for. For instance, two factories may produce the same fabric from the same stock and size of yarn, but one produces the full weight from the loom, in the other, goods from the loom are not up in weight and must be shrunk in length until the weight per yard is right or filled with flocks. It is a great help to the product to weave the goods a little light and gain the weight in the fulling mill; it is true that in reality the loom has to throw about the same number of picks, but the time saved is in the work which goes much better in the loom. To fill cheaper grades of goods with flocks is a common practice, and a little of it on some is a real benefit. The goods to be flocked should have the selvages closely sewed together, with the side to be flocked outside; if not washed before fulling, run dry a few minutes before adding the flocks, a few minutes after and then wet out with the soap. This makes the goods a little more pliable, gets the flocks more evenly on all parts of the piece before the closing up of the fabric begins. If many flocks are to be put into the goods, fresh flocks should occasionally be added during the process. The slack method of putting in a few baskets full at once and for all has much in it to condemn, principally that the more goods have been fulled the harder they take the flocks; from a lot of flocks put into the mill the goods will take the best first; therefore, after the flocks begin to go in slowly there are only poor flocks left to go in. The practice of mixing good and bad flocks is erroneous. The better way is to put the desired proportion of the poorer kind into the mill first, and at the right time to add good flocks.

"The best method to govern the gain of weight per yard by shrinking is given us by a fuller, who has had good opportunities to test the rule. Ascertain the weight total of a piece in the grease after washing, gigging, and shearing. Note the difference or loss in each and all these processes. Multiply the number representing the yards in length of the entire piece by the number showing the actual weight per yard in ounces after shearing; divide the product by the weight per yard desired; the quotient is the number of yards in the piece after it has been sufficiently shorte ned by shrinkage. The difference between this and the length before shrinkage shows the length to lose. Whatever proportion of the piece this may be, the same proportion per yard or any number of yards must be taken up. Now by putting two pieces of tape or string in the selvage of the piece any known distance apart it is only necessary to measure this space to ascertain if the proper paoportion is taken up. For instance, a piece 36 yards long weighs 18 ounces per yard after washing and shearing; if kept out in length it

would weigh, say, only 26 ounces, but should weigh 18 ounces. It is, therefore, 2 ounces light. To gain 2 ounces per yard how much must the piece be shrunk? Thirty-six yards clean, weighing 16 ounces per yard, the total weight is 36 × 16=576 ounces, it will take as many yards of 18 ounces each to make 576 ounces as 18 is contained in that number=32. The piece must be shrunk from 36 yards to 32— a shrinkage of 4 yards, or $\frac{4}{36}$ of the the whole. Now, if the whole piece must shrink $\frac{4}{36}$ of its own length, each yard or any number of yards, in any part of the piece, must shrink in the same proportion. To make the calculations easy, measure off as many inches between tapes as there are yards in the piece, then you have only to shrink this marked space the same number of inches as the number of yards the piece is to be shrunk, viz., in the above example you would measure 36 inches, and this would have to be reduced to 32 inches. It is a good plan to mark two or more places in different parts of the piece. By carefully noting on the first piece how long the felting-box or clapper was applied a safe guide for others of the same kind is obtained. Goods should always be washed as soon after fulling as possible. If they must lay over night let them be well spread out."

Fashionable Fabrics.

IN the various departments of the merchants' warehouses in London, Manchester, Bradford, &c., there is at present a great variety of new goods in stock, and also of new patterns for the seasons of 1884. Amongst the latter there are some admirable specimens of dress goods in self-coloured all-wool materials, but these will play only a secondary part in the ensuing season's styles. In fancy materials there is a very large assortment of varied designs and colourings; checked tweeds, and similar makes, being in high favour. The changes are rung, in an infinite number of ways, upon the same colour; the following combinations being very prominent:—Blue and red, green and red, blue and yellow, black and white; blue, russet and red, dark blue, light blue and old gold, cyprus-green, old gold and crimson, cyprus-green, bright blue and green; dark blue, crimson, pale blue, and russet; cyprus-green, dark blue, crimson, and yellow; dark blue, crimson, and white; black and blue check with cross bars of red or yellow; yellow and dark blue checked with pale blue and red, &c. Black checked with a dark colour is traversed by speckled lines of a brighter shade, while broken checks are made up of thick single threads worked into dark coarse cloths. Many new woollen fabrics, in novel arrangements of colour and design, are in great favour. A contemporary describes some as having, for the most part, dark coloured foundations, whilst those with whity-brown grounds are looked upon as somewhat eccentric, and used only by the first-class couturiers for making up very *chic* travelllng and country gowns. Navy-blue has clustered lines, in various widths, of russet, mixed with a few threads of red and green, of yellow, green, and red, and of moss-green and a little red. Narrow stripes made of two or four threads of coarse red wool, mixed with a dash of yellow or green, are woven on navy-blue slightly interwoven with red; while dark cyprus-green has single threads of red, green, and yellow, forming broad stripes, yellow, green, pink, and white being managed in the same way as the seal-brown. Sometimes the lines are woven irregularly, or form tiny curls at intervals, thus yellow and bright green, or yellow and red, on navy-blue, and cyprus-green, dull purple and brown, on plum colour. The woollen damasks have large conventional flowers or other devices, in one of two colours, strewn at intervals; for instance, circles of light grey on slate, of russet, green on cyprus; single roses or pinks in dull golden yellow or brown, in crimson on navy-blue, and in red on dark green; also slightly-sketched flowers or fruits of several colours on any dark blue, griffins or chimæras' heads in such combinations as moss-green and plum colour, crimson and grey, the brighter tint being laid in in very small quantities. Others of these woollen damasks are speckled here and there with some bright hue, such as yellow, red, or electric blue, being otherwise excessively dark; anyhow, indeed, the pattern is not one to be very visible a few yards off. Many of the above combinations are also produced in silk and mixed goods

Austria has adopted a system of factory inspection which has just come into force. Dr. Migerka, of Vienna, has been in Berlin, studying the German organisation and its possible application to Austria.

Swiss Tapestries and Laces at the Zurich Exhibition.

The display of ancient tapestries at the Zurich Exhibition is of great variety and interest. The specimens on view are of almost every description and every class, from masterpieces of mediæval art, with wide borders of imperishable flowers and scenes from sacred history, to embroidered hassocks, carpets, and altar cloths. One of the most ancient is a grand linen carpet, dating from the end of the eleventh century, richly embellished with Romanesque designs, and covered with mysterious symbols, the key to which has been lost. In a contiguous case is a similar carpet of the sixteenth century, on which is wrought a hunting scene; all the animals depicted are surrounded with thistles, and the general effect of this singular combination, though *bizarre*, is neither inartistic nor unpleasing. A tapestry worked in 1559 depicts the misfortunes of Jonas, and the fair artists by whom it was designed have bestowed upon the disobedient prophet features so unmistakably Zurich, that you have only to look round to find a face that might have served as the original. Next in number to biblical scenes are episodes from the national history, the favourite subjects being the three Switzers taking their famous oath in the Grütli meadow, Tell shooting the apple from his son's head, Baumgartner killing in his bath the murderer of Wolfenschiessen. Worsted tapestries are less numerous than those in linen, probably owing to the greater difficulty of preserving them, but among them are some exceedingly interesting and beautiful specimens, albeit the designs are less original and fantastic than those of the linen tapestries. One is the famous and incomparable tapestry of Kyburg. It is one mètre 64 centimètres wide, and one mètre 89 centimètres high, and records the genealogy, with forty portraits in needlework, of the Dillingens, the Kyburgs, and the Dukes of Swabia. This tapestry bears the date of 1568, and an entire article might be devoted to its description. One of the cases contains specimens of ecclesiastical and sacerdotal tapestry. Many of these are of great splendour and high antiquity. Perhaps the most magnificent sample of needlework to be seen in the exhibition is an altar cloth (*antependium*) in white satin, wrought in the seventeenth century, and sent by the Convent of Einsiedeln, whose property it is. From mediæval tapestries to modern embroideries is but a step, though, perhaps, a long one, and the exhibition is even richer in the latter than the former. There are more than 100 exhibitors of laces and embroidery, and they are to be seen in every variety, from the fine and artistic handwork of Appenzellinner-Rhoden, to the cheap machine-work of Zurich and Solothurn—from church ornaments to dress shirts, from court costumes to chair cushions—plain and in colours—from designs the most æsthetic to patterns the most florid. Vicosoprano, a lofty valley, bounded by the Col de Maloggia, where a society has been formed for the encouragement of feminine labour, sends samples of Point de Venice and Point des Gobelins. St. Gallen shows machine-made embroideries of every sort, and from the nunneries of Zug and St. Gallen come altar ornaments, ecclesiastical vestments and sacerdotal banners, wrought in silk, and silver and gold. The making of lace and embroidery is one of the most important industries which Switzerland possesses. It took its rise at St. Gallen in the middle of the last century, and is now extensively practised in the Cantons of Thurgau, Appenzell, and Zurich. The trade is one which those engaged in can follow at home—for a country of small cultivating land-owners and long winters is an advantage that cannot be too highly estimated. In the season, when the labours of husbandry are suspended, it finds useful work for every member of a family. There are three branches of this manufacture. The most extensive is that flat-point or machine embroidery, a branch which finds employment for 45,000 workpeople, and produces wares of an annual value of £3,200,000, the greater part of which are exported to the United States. Though it is only thirty years since this manufacture was established it has made great progress, as the ingenious and complicated machines on view in the exhibition abundantly testify. The second branch is the

making of "chain-point" embroideries, the goods produced consisting, for the most part, of figured blinds, curtains, and so forth. It affords employment for 3,000 workpeople in the Cantons of St. Gallen and Appenzell; manufacturers of the former place also employ a considerable number of hands, who work little single-needle machines at their own homes in the Austrian Vorarlberg. The very finest work, exclusively hand, is done in Appenzellausser-Rhoden. A few years ago this, and also the chain-point machine embroidery were greatly depressed, and fears were entertained that both industries would be utterly extinguished by foreign competition and the increasing use of larger and more productive machines. But the danger was overcome, and even turned to profit, by paying greater attention to finish in workmanship and originality in design; and a comparison of present productions with those of the past shows how great is the progress which has been achieved. Some of the wares exhibited in this class are very costly. One pair of curtains alone, from Herisau, embroidered on tulle, are valued at £30. The new departure has created a new demand, and this branch of the trade is enjoying an unwonted prosperity.

The Condition and Prospects of the Cotton Trade.

AT the recent meeting of the British Association, a paper was read on "The Condition and Prospects of the Cotton Trade," which will be found of some interest to those concerned in the cotton trade generally. The reader said "That for a number of years the cotton trade in this country had suffered severe depression, in spite of the improved appliances of the present day, as compared with those of ten or twenty years ago, by means of which improvements the cost of converting cotton into yarn is at least a half-penny per pound weight cheaper, the profit obtainable is less than it was, until now simple interest is all that is generally made upon the capital employed in the trade, which is not a proper rate of compensation for all the contingencies incident to fixity of costly plant. The tables with regard to the consumption of cotton in Great Britain and the Continent, since 1836, showed:—1. That the production of the world's crop has steadily increased from the first development of the trade, except during or immediately succeeding the period of the American war. 2. That the absolute quantity consumed in Great Britain has steadily increased in like manner and with the like exception. 3. That the absolute quantity used in the three other positions has also increased in like manner. 4. That the ratio of increase has been greatly in favour of all the positions except that of Great Britain. Thus, continued the reader, if we have regard to the first three indications, the matter appears wholly a subject for congratulation. If we have regard to the last indication, the appearance is that the cotton trade of Great Britain does not flourish so well as that of other countries. The growth of the trade in other countries has been assisted by the following causes:—The increased facilities of transit and communication have rendered it possible for cotton to reach the point of manufacture, almost wherever that point may be, at about the same cost; thus the raw material, which formerly (so far as it was used upon the Continent of Europe) was landed in Liverpool, goes direct from the cotton-growing States to the Continent, and our competitors there have not nerve to bear double port charges, double freights, double or treble profits *in transitu*. The British goodwill of the business is being narrowed by the diffusion of the trade, consequent upon its being made easy to all. Under the second head, the tariffs imposed by foreign nations upon British manufactures, and the restrictions upon our own labour imposed by our Factory Acts, press adversely upon the trade in Great Britain. The competition to which we are parties is not between labour and capital within our own boundaries, but between labour at home and labour abroad, and not wholly between English and foreign labour, but, in a great measure, between Lancashire labour at home and Lancashire labour abroad; for not only are we constantly supplying the best machinery, but the best Lancashire hands to the mills of the Continent, the United States, and India. It is true that for every farthing which might be saved in increased economy in respect of the elements of cost within our control, we are handicapped five or ten farthings by the protective tariffs of other countries; but they are not within our control, and a saving of even a farthing a pound often makes all the difference between good trade and bad trade. It has been urged in some quarters that the remedy for trade depression is to be found in the closing of our mills one or two days a week, so as to limit supply and so stimulate demand. In my opinion such a course would be suicidal, for, while it would enhance the cost of production to ourselves, it would not affect the cost to our competitors of their productions, while they would equally participate in the advantages of the advance in price. So they would be encouraged to erect new mills, and to the extent to which we had thrown our own mills out of employment voluntarily, they would have to remain closed afterwards under compulsion of the secondary effects of our own acts. The present depressed condition of things is thus attributable to the reality of foreign competition, encouraged by two-fold causes, viz., (1) the legitimate effects of improved appliances arising out of the common human advancement, and (2) the illegitimate consequence of international "boycotting," that is to say, protective tariffs, and of our own internal trade restrictions. The only hope of relief lies in the economy of our work, the quality of our workmanship, our own persistent loyalty to the principles of liberty in relation to trade, and the gradual recognition on the part of other nations of the same great principle."

Floral Cards.

The general taste of the public does not run upon pure styles of ornament, at all events, as applied to designs for fabrics of all kinds. Purity of ornament has often been tried, but with no lasting result. Such patterns certainly have only a brief run. However much this is to be regretted, it still remains a fact. What is wanted, and what seems likely to be always wanted, is something pretty—it matters not what—something which will please the eye; the greater the novelty, the better the chance of selling. In order to produce such patterns, every manufacturer should keep his designers well supplied with suggestive material. But too many seem to expect that, if a man is a designer, he can bring out reams of good patterns without seeing, or requiring, suggestive material to assist his talents. It should be the rule with all, who wish to keep a-head, or even abreast, of the times, to keep their designing departments replete with everything that can assist the faculties of those on whom so much of the success of a manufacturing firm depends. There are many who imagine that in purchasing one or two of the best illustrated works as specimens of the various correct styles of ornament, they are furnishing their studios with all that is necessary. Certainly such works should find a place in every studio, but there are many other materials which should not be overlooked, and some of these are, perhaps, so simple as to be considered unworthy of notice, amongst which we will draw attention to Christmas, New Year, and other floral and ornamental cards, as material for assisting designers in their work. During the last two or three years vast strides have been taken in the character of these cards, and at the present time many of them may lay claim to be considered, and in reality are, works of art; and, whilst being so useful, they are comparatively inexpensive. We know many manufacturers who buy floral and ornamental cards largely, these are mounted in books for the use of their designers, and the result is that many novel, pretty, and often, elaborate designs have been produced from suggestions emanating from such simple sources.

A New Vegetable Wool.

The *Moniteur des Fils et Tissus* calls attention to a description of vegetable wool called *kapoc*. It comes from Java, and a specimen is on view at the Amsterdam Exhibition. It arrives at Amsterdam in its leathery covering, being itself enveloped in the seeds. It is then freed from both, and is carded so as to make a very light mattress wool, worth about $8\frac{3}{4}$d. per pound. One of the houses engaged in this operation has made trials in spinning and dyeing this material, but the filaments are said to be like strings, and their industrial application is consequently a matter of uncertainty.

Improvement in Weaving Rugs.

In the weaving of rugs, which have had a similar design on both back and face, it has generally been the case that, in order to produce the above, two pieces of the fabric have had to be woven at separate times, and have then been placed and secured, back to back, in order to give the rug the appearance of being faced with the same pattern on both sides. This process has naturally added to the cost of production, owing to increased labour, &c., being required in the manufacture. Recently an improved method of weaving the rugs has been patented. It consists in producing, by one process, a double-faced rug, having on both sides the same design, or, if required, it may have, on each side, a pattern of a different description. This double-faced rug is woven in one loom, at one operation, and from one warp. The warp is operated upon and opened by the healds, which may be composed of any required number, but divided into what is technically called "two division," so that the fabric is formed of two layers or divisions; the healds, together with the pegging apparatus and shuttle motions, being so arranged that the weft appears on the surface of the material at one time, and at another time on the underside, the only time when the warp appears either on the upper or under surface is when it is employed to connect the two layers or divisions of the material. After the fabric has been woven in the above manner, it may be passed through any of the ordinary processes of milling, washing, and finishing, and when made of strong material it may be raised and cropped in addition. This method of weaving may be adapted to a variety of textile fabrics, which can, by this process, be produced at a much less cost than by the system now in general use.

The Cochineal Trade of Teneriffe.

The old proverb that "What is one man's meat is another man's poison" was never better exemplified than in the cochineal trade, which has been nearly ruined since the discovery of aniline dyes. Until very recently, this trade was the mainstay of the island of Teneriffe, the cochineal depending upon the cultivation of the cactus plant (*Opuntia Ficus Indica*), which, since the supercession of the trade by aniline, is no longer the remunerative business that it formerly was. Cochineal consists of several kinds and qualities, the first and second qualities being called black *aconchada*, the others being *madres buenos* and *plateada*. The export trade is principally in the latter kinds, the first being less abundant and having to be more carefully picked and sorted. The *madres buenos* is seldom exported, but is principally used for propagating the cochineal insect by sprinkling them on the thick fleshy leaves of the plant, which flourishes equally well in indifferent and rocky soil and requires little or no care or irrigation. During 1882, the shipments of cochineal were 4,840,316 lbs., showing a diminuation of 791,339 lbs. on the export of the previous year. Of this quantity England took 2,715,983 lbs., America 868,813 lbs., and France 952,460 lbs., the remainder going to Germany, Spain, and Morocco. The trade might have continued in a better state, had not the cochineal farmers glutted the markets, and refused to see the necessity of lowering their prices in consequence of the discoveries of fresh colouring matter.

Manufacture of Figured Pile Fabrics.

In the class of figured pile fabrics, in which the figured pile is formed from the warp threads, many improvements have been made during the past few years, one of which was patented a short time ago, and relates to increased facilities for the cutting of the pile. It is done by the knife passing with greater certainty from the "race" of one figure of weft pile to the corresponding "race" of another figure of the same, without the liability to slip out of the race, or to trip or catch the edges. In designing the patterns for the manufacture of figured weft pile fabrics, in accordance with this invention, the design is arranged so as to step or move in "races" at the edge of the figures. For example, if a design be made with a pile of seven float and one binding thread, in which there is one "race" for every two warp threads in the cloth, as in an ordinary E.1. velvet, then, as there is a "race" for every two ends, the edge of the figure must step or move two warp threads (or any multiple of two) each time. The same system applies to any other weft pile "tie-up," of course varying the stepping or moving of the edge of the pattern according to the "tie-up" used. In a pile which has a race for every four warp threads, the pattern would step or move in fours, and so on, the edge of the design always stepping in "races." The advantage of this system, says the inventor, is that it facilitates the cutting, as it enables the cutter's knife to enter the "race" (after passing over a portion of the ground) much more easily than on the old plan, on account of the small squares formed by stepping or moving in races, which act as guides for the point of the knife, and prevent it from slipping out of the race.

On the old plan the knife very frequently entered the wrong "race" after crossing over a portion of the ground, but this difficulty is overcome to a great extent by these improvements. Another point to be observed in designing the patterns is that, in addition to stepping or moving in "races" along the edge of the patterns, care must be taken to turn the points at the top and bottom of each figure on an odd number of warp threads, the exact number of threads at the turning point depending, of course, on the shape of the figure or pattern. The object of this turning on an odd number of ends is that the "race" will always be nearer the centre of the small square or step. Were the point of the pattern to be turned on an even number of ends, it would have a tendency to throw the knife out of the "race." In addition to the above system of stepping in races at the edges of the design, and turning the points at top and bottom on an odd number of warp threads, all the short floats at the edges of the pattern are thrown to the back of the cloth. For instance—in a weft pile of seven floats—all smaller floats than *five* are thrown to the back of the cloth. Floats of four could be cut, but it will be found much easier for cutting if there are no smaller floats on the surface than five. At the edges of the pile figures made on the old plan, there is always a large quantity of short floats which interfere with the cutting, as they have a tendency to throw the cutter's knife out of the race; but according to this system, as these short floats are thrown to the back of the cloth, the cutting is greatly facilitated. Even with a seven float and one binder "tie-up" it would be rather easier to cut if all floats of five could be dispensed with, by throwing them to the back of the cloth, and only leaving the full floats of seven; but by so doing the pile would be robbed from the edge of the figure, which would injure the effect to a great extent. It will be seen from the foregoing particulars, that this improved system of manufacture of figured weft pile fabrics consists in the combination of three elements or principles, viz.:—Stepping in "races" at the edges of the pattern, turning the points of the pattern at top and bottom on an odd number of ends, and throwing the short floats to the back of the cloth. The patentee says, "These three principles combined will be found so greatly to facilitate the cutting, that figured weft pile fabrics woven on this system may be cut almost as easily as plain velvets." But he wishes it to be understood that he also reserves to himself the right to manufacture figured weft pile fabrics by the combination of two of these elements, for instance, stepping in races and throwing the short floats to the back; or stepping in races and turning the points on an odd number of ends; but he considers that the triple combination is more effective.

Commercial Failures.

According to *Kemp's Mercantile Gazette*, the number of failures in England and Wales, gazetted during the five weeks ending Saturday, September 29th, was 783. The number in the corresponding five weeks of last year was 860, showing a decrease of 77, being a net decrease, in 1883, to date, of 280.

The failures were distributed amongst the following trades; and for comparison, we give the number in each, in the corresponding weeks in 1881 and 1882:—

	1883	1882	1881
Building Trades	81	85	114
Chemists and Druggists	9	6	12
Coal and Mining Trades	14	17	9
Corn and Cattle	11	7	18
Drapery Trades	76	60	71
Earthenware Trades	7	8	8
Farmers	21	32	57
Furniture and Upholstery Trades	9	26	13
Grocery and Provision Trades	158	175	180
Hardware and Metal Trades	30	38	18
Iron and Steel Trades	26	18	22
Jewellery and Fancy Trades	24	49	26
Leather and Coach Trades	45	48	54
Merchants, Brokers, and Agents	85	107	113
Printing and Stationery Trades	21	14	18
Wine, Spirit, and Beer Trades	86	91	101
Miscellaneous	80	79	81
Totals for England and Wales—	783	860	915
Scotland	91	73	58
Ireland	13	15	26
Totals for United Kingdom—	887	948	999

The number of bills of sale published in England and Wales for the five weeks ending Saturday, September 29th, was 1,143. The number in the corresponding five weeks of last year was 3,768, showing a decrease of 2,625, being a net decrease, in 1883, to date, of 26,616.

The number published in Ireland for the same five weeks was 53. The number in the corresponding five weeks of last year was 112, showing a decrease of 59, being a net increase in 1883, to date, of 117.

ORIGINAL DESIGNS.

We have pleasure in presenting to our readers, on our first plate, a design for a Tapestry Antimacassar, which forms a decided departure from anything we have yet published. This pattern has been designed by Mr. W. Tait, 34, Carter Street, Greenheys, Manchester, with whose works our subscribers are familiar. The design would look well woven in cotton, jute, or woollen, whilst the effect would be heightened by the use of silk for the finer parts, and for shading, etc. Altogether, the pattern is a good one, and should prove of value to a large section of manufacturers.

* * * *

Our second plate shows a design of a simple character, which is intended as the body pattern of a Tapestry Quilt, to be produced on, about, a twelve inch scale. As the body for a Tapestry Table Cover, this pattern would adapt itself readily—the length of the repeat equalling the breadth. It has been designed by Mr. R. T. Lord, 3, Gerrard Street, Halifax.

* * * *

Our third design is the work of Mr. J. L. Horner, 57, Dodworth Road, Barnsley, and is intended as a suggestion for a Fine Linen Table Cover. The body of the design would also make a good pattern for printed silk.

Prize Competition.

Owing to the large number of entries in this competition, we have been unable to have the whole of the designs gone through satisfactorily, and are therefore unable to announce the prize winners in this issue, as we had intended. We hope to have the decision of the judges in a few days, when we will communicate with the winners by post, and will also publish the result in our November issue.

MONTHLY TRADE REPORTS.

Wool.—At the London sales, which closed on the 3rd inst., the better qualities of wool were in good demand, and at very firm rates, whilst the lower qualities met with a rather dragging sale, but at prices about on an average with those of the last sales. In the Scotch districts, transactions were on a small scale, but without any quotable alteration in rates. In the Yorkshire markets, the demand for English wools was an average one, holders, as a rule, asking firmer rates; in Botany wools, there was more doing at rather higher prices. In the yarn and piece branches, a little more inquiry took place, but the business actually transacted was not increased to any great degree; in the fancy dress and worsted coating departments, sales have improved since our last issue, and prices, on the whole, have kept firm.

Cotton.—For the raw material a fair demand has been experienced at somewhat fluctuating prices, but the rates have been about on an average. The American crops production of cotton has been stated to be 6,992,234 bales, the greatest crop yet produced in one year. This statement will, no doubt, have the effect of keeping the prices down to the present low ebb. In the yarn and cloth branches, business has not improved to any appreciable extent, and the month closed with a dragging market. The better grade of shirtings has been in moderate request, and the same may be said of some varieties of fancy goods; but plain goods, as a rule, have been slow of sale. Prices average those of our last report.

Woollen.—The trade in the Leeds district is, on the whole, satisfactory; the demand for the heavier makes of goods has increased, and prices have been well maintained. For the finer qualities, such as fine worsteds, tweeds, serges, diagonals, and fancy cloths, the demand has been good at firmer rates. The export branches are fairly employed. Manufacturers have a fair prospect of full work for the winter season. In Huddersfield, the state of things is not very satisfactory: some firms keep fairly busy on fine goods, but, as a rule, trade is quiet. In Halifax, a fair business is being done in worsted coatings, &c., and firms at work on this class of fabrics are well employed. In the Scotch districts, manufacturers are running full-time, and the prospect before them is fairly good. Tweeds sell well. The new patterns being got up at present are sure of a good sale.

Linen.—A fair amount of activity has been experienced in nearly all branches of the linen trade. Some very elaborate designs are now being brought out in nearly all departments of the piece goods trades, and, on the whole, are meeting with favour. The home trade has improved in tone, and the demand for export is fair. Prices, as a rule, have had a hardening tendency. In the jute branch, a steady demand has continued, and manufacturers are well to the front with orders at fairly remunerative rates. Prices in this branch also have a hardening tendency.

Carpets.—This branch, especially in the better classes of fabrics, is in a healthy state. The range of patterns, in the market at present, excels, both in design and colouring, anything that has previously been attempted in the trade. As a rule, the carpets now being produced are also improved in quality. The demand for Brussels and rugs is very good, and tapestries meet with a moderate sale. Prices are not so remunerative as manufacturers could wish, but still a better state of things exists than was the case a few months ago.

Lace.—The lace trade has been in the same unsatisfactory condition that we have had to chronicle for some months past. No material improvement has taken place in any branch, and the prospect for the winter season looks rather gloomy. The curtain trade is still dull, and much machinery in this branch is lying idle. Prices of goods sold do not leave much margin for profit to the manufacturer.

French versus Yorkshire Textiles.

"Superhuman exertions are now being made by the French manufacturers," writes a contempory, "to fill the English orders, and ship loads of velvet goods are arriving every week. France is striving to make up for lost time, English buyers having been waking them up by personal visits, and when one or two determined Englishmen get in amongst French manufacturers, and "insist," the Frenchman bestirs himself, especially when, as we understand, small bounties have been offered to quicken his zeal. One strange, and, indeed, hopeful feature has shown itself in the sales of the past six weeks. French woollen goods are not nearly in as much demand, either for home or the colonies, as in past years, but Bradford and Yorkshire goods generally have shown an unwonted increase. This is due not so much to the behests of fashion, which still encourage French fabrics, as to the inherent good quality of the Bradford makes. It was foretold as early as June, when the agents first began to show their autumn patterns, that such first-rate samples would be bound to make their mark before the season was over, and that this has been proved in the most satisfactory way must be sweet indeed to those who believe in keeping money in the old country. "Once our English woollen manufacturer finds he can hold his own against his French rivals and he will be stimulated to fresh efforts," said a well-known authority some three years since, when enlarging on the textile trade; but the speaker, although he ventilated the thought hopefully, could hardly have supposed that before six seasons had gone by the men of Bradford would have achieved the task set them. The English serges and merinos this year are of astonishing value, and we have had samples submitted to us which, for delicacy of shading and textural touch, would have made a good many large French loom owners look somewhat anxious. More than one or two French wool departments in the wholesale houses will wear a curious look this year as stock-taking approaches, unless the late autumn trade changes the present stagnation."

12TH OCTOBER. 1883. DESIGNED BY J. L. HORNER.

LINEN TABLE COVER.

12TH OCTOBER, 1883. DESIGNED BY W. TAIT.

TAPESTRY ANTIMACASSAR.

12TH OCTOBER, 1883 DESIGNED BY R. T. LORD

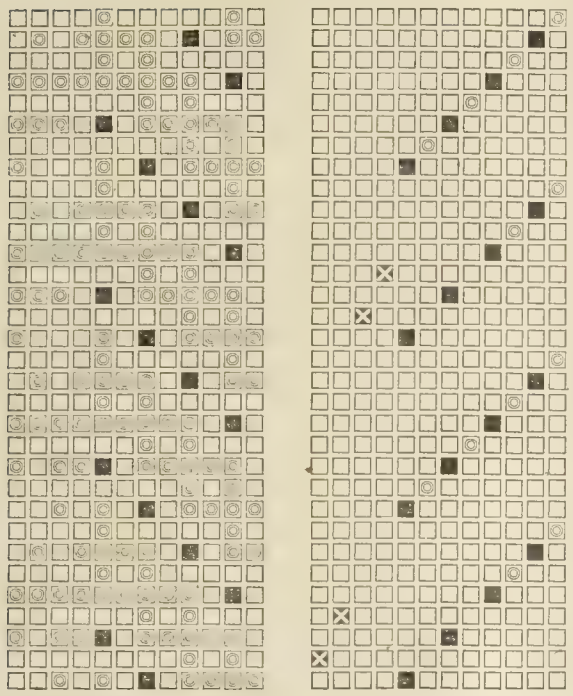
TAPESTRY QUILT

ORIGINAL DESIGNS.

For Winter Season, 1884.

Cheviot Double Cloth—Winter Weight.

No. 106.



Plan. Draft.

Warp:
5 Brown Drab Mixture.
1 Scarlet.
6 Brown Drab Mixture.
4 Dark Brown.
5 Brown Drab Mixture.
1 Light Blue.
6 Brown Drab Mixture.
4 Black.

Weft:
15 Black.
1 Black and Crimson twist.
15 Black.
1 Black and Light Brown twist.

■ represents the backing thread.
▣ the facing threads.
⊠ Dark Brown and Black on the face.

The ■ in the plan are for binding and must not be pegged.

Warp and weft yarns:

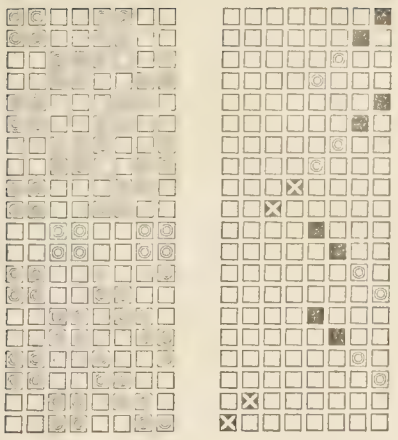
Brown Drab Mixture—24's cut yarn=4,500 yards per lb.
Scarlet ,, ,,
Dark Brown ,, ,,
Light Blue ,, ,,
Black ,, ,,
50's cut yarn, Black and Crimson=24's. ,,
,, ,, Black and Light Brown=24's ,,

No. of threads in warp, 3,760.

16/6 reed.
9's ,, Yorkshire count.
94 porters yer yard.
56 shots or picks per inch.
70½ inches wide in loom.
56 inches wide when finished.
Cheviot finish.

Cheviot.

No. 107.



Plan. Draft.

Warp: 2 Black.
2 Black Grey, Light Shade.
2 Black and White twist.
2 Black.
2 Black Grey, Light Shade.
2 Black.
1 Black Grey, Light Shade.
1 Crimson.
2 Black and White twist.
2 Black.
2 Black and Gold twist.

Weft: the same as the warp.

⊠ Twist. ■ Black. ▣ Light Black Grey.

Warp and weft yarns:

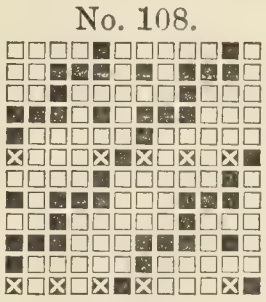
Black—17 cut yarn=3,100 yards per lb.
Black Grey ,, ,, ,,
Twist { 36 cut single / 36 cut single } 12 turns per inch=3,100 yards per lb.

No of threads in warp, 1,920.

16/3 reed.
9's ,, Yorkshire count.
48 porters per yard.
27 shots or picks per inch.
73 inches wide in loom.
56 inches wide when finished.
Cheviot finish.

Winter Coating or Suiting.

No. 108.



Design.

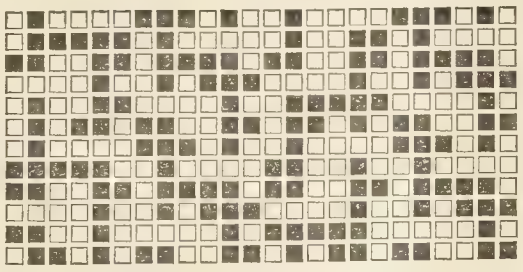
Warp:
1 Crimson and Green twist, 28 skeins.
1 Light Drab or Tan, single, 21 skeins.
1 Self Black or Dark Green twist, 28 skeins.
1 ,, ,, single, 21 ,,
1 ,, ,, twist, 28 ,,
1 ,, ,, single, 21 ,,
6

Weft: 1 Slack twist, Yellow and Green, 28 skeins.
5 Dark Olive or Black, single, 21 ,,
6

3,640 ends in the warp.
60 picks per inch.
13's reed.
4 ends in one split.
70 inches wide in the loom.
56 inches when finished.

Winter Trouserings.

No. 109.



Design.

Weft: 1 Black.
1 Brown.
1 Black.
1 Light Bronze Green.
1 Brown.
1 Black.
6 picks.

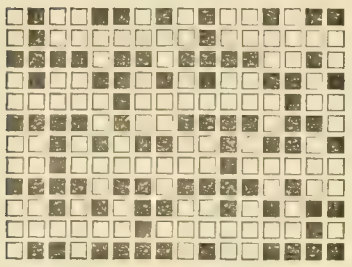
Warp and weft:
20 skeins twist composed of 3 threads, when twisted to be 20 skeins.

4,480 ends in the warp.
64 ends per inch.
64 picks ,,
16's reed.
4 ends in one split.
70 inches wide in loom.
56 inches when finished.

Warp:
6 Black, single.
1 Brown ,,
1 Black ,,
1 Crimson, Green and Blue twist.
2 Black.
1 Light Bronze Green.
6 Black.
1 Light Drab.
1 Black.
1 Orange, Green and Scarlet twist.
2 Black.
1 Brown.
6 Black.
1 Light Bronze Green.
1 Black.
1 Crimson, Green and Blue twist.
2 Black.
1 Light Drab.
6 Black.
1 Brown.
1 Black.
1 Orange, Green and Scarlet twist.
2 Black.
1 Light Bronze Green.
6 Black.
1 Light Drab.
1 Black.
1 Crimson, Green and Blue twist.
2 Black.
1 Brown.
6 Black.
1 Light Bronze Green.
1 Black.
1 Orange, Green and Scarlet twist.
2 Black.
1 Light Drab.

72 ends in the pattern.

No. 110.



Design.

Weft: 2 Black.
1 Medium Blue.

3 picks.

Warp:
1 Medium Blue.
1 Light ,,
1 Medium ,,
1 3-fold twist—Black, Crimson and Green.
4 Black.
1 Medium Blue.
1 Light ,,
1 Brown.
1 Light
4 Black.
1 Medium Blue.
1 Light
1 Medium Blue.
1 Brown.
4 Black.

24 ends in the pattern.

Warp and weft: 20 skeins. The 3-fold twist to be composed of 3 threads, which, when twisted, must reel 20 skeins or 5,120 yards per lb.

4,096 ends in the warp.
64 picks per inch.
64 ends ,,
16's reed.
4 ends in one split.
64 inches wide in loom.
56 ,, when finished.

Protective Tariffs.

On the Continent, as well as in the United States and Canada, much is, at present, being said by the leading papers of those countries concerning the protective tariffs and free trade. The condemnation of protection is, by some of the papers, put in rather forcible terms. The *New York Herald*, in a recent article, has spoken very strongly against such policy in the trade matters of that country. The advantages of free trade, and the disadvantages occasioned by protection have been illustrated in various ways. Our contemporary has shown that the favourite device of protectionists, viz., reduced production, is not the proper cure for bad trade. After alluding to some recent experiences in the American iron industry, in which diminished production had been tried as a mode of restoring prosperity, the *Herald* observes that the result was lessened wages to workmen. Many were thrown out of employment, and others were obliged to accept a price for their labour which scarcely sufficed to keep them alive. The paper in question criticises the argument for protective duties, and for lessened production as a means of curing bad trade in the following terms:—"The tariff, it is said, is imposed in the interests of the working men, in order to ensure them living wages and continuous employment. But how can the employment be continuous when the works are opened and closed according to the condition of the market? And, at an average of one dollar and a quarter per day, how can a man earn living wages when he is allowed to work on the average but a part of the year? It is the tariff which causes this ebb and flow, by preventing the exportation of iron and steel, and thus closing the vent through which the surplus product might find a market. The wider the market the steadier is the employment. Let the working man vote for a reformed tariff." With regard to the policy of working "short time" and the temporary advantage gained by it, the *Herald* adds:—"No sooner is there the sign of profit than the works start up again, only to go through the old cycle—stimulated productions, glutted markets, falling prices, depression, and stagnation." In Canada over production, the result of unnatural stimulation by means of the protective tariff, is yielding its natural fruit in the cotton industry. Judging by accounts which reach us, the accumulation of goods is enormous, and they cannot be exported owing to the high cost of production, which is the inevitable consequence of a protective system. The Canadian manufacturers are therefore trying to form a combination for the purpose of organising a general short time movement. They asked the Legislature to protect them from their foreign competitors at the cost of consumers, and now they are suffering from excessive competition amongst themselves. The short time movement has not yet been agreed to, and it is not regarded by the *Montreal Witness* as likely to be adopted. The proposal is that the mills shall be shut during two days in each week. "That means" says the *Witness*, "a reduction of $33\frac{1}{3}$ per cent. in the weekly wages of the mill hands who are, in the best of times, getting only living wages." And what does it mean as regards the capital employed? The *Witness* answers "that the adoption of this short time policy will involve the laying idle of £560,000 of the £1,700,000, to which Canadians have been proudly pointing as invested in the cotton industry of the Dominion." "Indeed," says our contemporary, "it is now quite evident that of the entire number of spindles at work in Canada—480,000—not less than 160,000 are unnecessary. A further feature in the proposed combination is the fixing of a minimum price, under which producers are not to be allowed to sell. And yet the promoters of the "national policy" promised that in the end the result of Protection would be to bring about lower prices for consumers than those at which imported goods could be sold. It is predicted that the combination cannot long hold together." On the Continent, during the past six or seven years, protective tariffs have been passed in Germany, Austria, France, Italy, and Russia, and yet trade in these countries is at present in anything but a flourishing state as regards most branches. A contemporary speaking of the decline of trade in France, says:—"Not the least of the misfortunes of France, is the relapse into Protectionist ideas, which has been more or less forced upon that country by the necessity of placing taxes upon something. The interest on the five milliards, and on the money raised by loans for defences and public works, has greatly swollen the yearly national expenditure since the war with Germany, and some 27 millions sterling have to be raised by increased taxation in consequence of the greater yearly debt charge. A burden like this falling upon a population almost stationary in numbers, and retrograding in material prosperity, could not fail to tell heavily sooner or later upon that very trade which it was most necessary to augment if the national burdens were to be met by increased profits. Unfortunately, the system of Protection, favoured and reverted to by the Republic—as much as anything because it was rejected by the Empire—while spreading at first a fictitious glow of prosperity upon the trading interests of France, has ended, as usual, by cramping the trade which it at first appeared to foster, and the commercial relations of France with other countries are slackening." Germany is in much the same state; trade, except in some special departments, is of a very dragging nature. Although these facts speak for themselves, the cry is still for increased protection, which, if carried into practice, must result in increased difficulties to these countries."

Lithographs of Ancient Textiles.

Among the recent additions to the Manchester Reference Library is the valuable series of chromo lithographs from ancient textiles, collected by Mr. F. Fischbach, the art director of the Textile Schools of St. Gall. These beautiful plates are a model of careful artistic printing in colour, and the examples reproduced are selected with great care. Seen in connection with the fine collection of textiles now shown at the Art Gallery, this new work will prove a great boon to designers of all kinds. The wonderful old pieces selected by Mr. Fischbach literally teem with hints of form and combinations of colour, which must be suggestive to anyone who has even the most ordinary designs to produce. The earliest examples are Egyptian, dating from about 1,000 B.C., then follow the most beautiful known pieces from Asia Minor and Byzantium, which again are followed by lovely examples from Sicily and Italy. The bulk of the latter pieces are Italian and French, but in every case the example is the best of its kind. The descriptions are in German, but the chief librarian proposes to have an English translation attached to each sheet.

MACHINERY, TOOLS, &c.

Economy of Steam.

The suggestion was recently made that power might be economized in the use of steam engines by employing the steam, not as the direct motive force in driving whatever machinery was involved, but rather by causing it to expend its energy in forcing air into a suitable reservoir, this compressed air cylinder furnishing, then, the active agent for propulsion. The object, at that time, was that wind wheels might come in as coadjutors to the steam engine, by yielding their own quota to the stock of compressed air, and thus saving precisely so much of steam power—which means, of course, *fuel*. But if this method of using steam could be brought into practical service, economy could be secured in a totally different direction, and to this our attention is called by the title above given. Whenever, and wherever, a steam engine is at work, it must be kept at its full working head of steam, nearly up to the very close of its service. Just before a steamer reaches her wharf, or before the six o'clock bell is about to ring for the shutting down of mill or factory work, if the engineer has a surplus of power, he can afford to bank his fires and economize a trifle, by working down a few pounds of his extra steam. But it is only a very little, for he must, of course, retain enough to drive the engine at its working gait fully up to the last minute. And when the bell rings and he shuts off steam for the end of the trip or the close of the day's work, his gauge shows a pressure but a few pounds below that at which he regularly runs. His boiler therefore is now a reservoir of power which is practically to be wasted. He either "blows off steam," or he does not, according to circumstances, but in either event the greater proportion of that power is lost for service. The dissipation of heat which necessarily takes place before the hour comes for starting again measures precisely the amount of energy wasted, for the vapour of water owes its efficacy only to the heat of recent importation. Without the heat its elasticity is gone. Can we not possibly substutite for it a gas whose elasticity does not depend on recent heat, but is a permanent quality at all temperatures, notwithstanding the fact that an increase of temperature gives an augmented elastic force ? Compressed air furnishes us exactly with what we need to answer our purpose. Were the force of the steam used mediately, through an air tank, and not directly, it would be an extremely simple matter to utilize the heat remaining in the boiler, furnaces, etc., so that scarcely any portion should be wasted. One turn of a switch would connect the steam power at once with pumps which would go on forcing air into the air tank so long as any power remained. No attention would be needed. When the power was expended the engine would stop moving, and all would remain quiet till required for use. The air thus condensed would be a given amount of active energy ready for application on call, and the efficient service of the engine for the next day would have just that amount furnished to its credit, with no expense added ; that degree of expense would be saved. How much this would actually economise must depend on the circumstances, but it would in any case be no insignificant item. Inquiries made of steamboat engineers show that, in their judgment, it would be sufficient to run the boat from five miles to ten, according to her size and speed. Some go much higher than that. And with a large ocean steamer there can be scarcely a doubt that it would decidedly exceed this. Surely this is a wasted power, which is worth saving.—*Scientific American*.

Engert's Boiler.

A new system of steam boiler construction has been devised by Mr. A. C. Engert, whose smoke-consuming apparatus was described about two years since. The chief features of the new boiler are that the radiation of heat is retarded, the circulation of the water increased, and the formation of smoke prevented. The boiler consists of an outer circular shell and two flat flues, one being placed over the other, and both being intersected by vertical tubes. The top flue has a bell-shaped mouth, in which is the furnace, which projects a little beyond the boiler front, and is enclosed in a box fitted with an air-regulating fire-door. The heat and products of combustion pass along the upper flue to the back of the boiler, and return through the lower flue, whence the heat and flame pass under and around the boiler to the chimney. The boiler is surrounded with brickwork and the heat being largely retained economy of fuel is promoted, and unequal expansion and contraction are prevented. Another feature is the provision of means for heating and purifying the water and depriving it of containing gases before it is used in the boiler. To this end a tank is fixed at the back of the boiler, and the water is heated to 212 deg. by the heat of the flue, causing the air and acids in it to be dispersed. In order, however, to throw down the carbonate of lime in the water a higher temperature is required, and this is obtained by means of a pipe placed in the tank and through which live steam from the boiler passes. The carbonate of lime is thus thrown down and prevented entering the boiler, and forming scale in it. A boiler on this principle has been in use at Mr. Engert's works, Three Mills Lane, Bromley-by-Bow, for the past nine months, and has recently been tested by an independent engineer, who reports great economy in fuel, high evaporative power, and absence of smoke.

The Tariff in Turkey.

Much attention has been paid recently, by the Chambers of Commerce in all the leading trade districts throughout the United Kingdom to the Turkish tariff question. The present duty affects some branches of trade very injuriously, and none more than the textile branches. A correspondent writes in reference to its effect on the cotton trades as follows :—"The commercial treaty with Turkey is a matter that affects the interests of Manchester in a larger degree than that of any other centre of trade. In 1882 the exports of cotton yarn and piece goods to Turkey were valued at 5,027,176, out of a total of exports valued at £6,970,874. The woollens exported are valued at £294,748. The metals produced and manufactured in the United Kingdom at £353,259. The value of the foreign and colonial produce and manufactures, included in the above named total of exports, was £548,332, of which produce, coffee, rice, tea, indigo, and pepper were the principal articles, being valued in the aggregate at £292,789. The merchants who re-export these and other articles, of which Great Britain is the entrepot, are interested to the extent of one-twelfth of the whole trade. These values refer to the trade of both European and Asiatic Turkey." Information also reaches us that the duty of eight per cent. *ad valorem*, which is being imposed upon British imports into Turkey, pending the negociation of a new treaty of commerce, is levied in a very offensive and mischievous manner. In assessing the rate of duty, the importers and the custom-house officials are rarely able to agree. The duty is, in cases of irreconcilable dispute, taken in kind. Eight pieces of cotton goods, for example, are appropriated out of every hundred imported, and the remaining 92 are handed over to the owner. The result, so far as the custom-house is concerned, is, of course, a serious loss. A large miscellaneous collection of merchandise is accumulated, the value of which is much reduced, partly because it is unassorted, and partly because it has to be forced off by auction at low prices, or at least so much of it as is left after the officials of the Seraskierate have selected what they need for army clothing. The consequence, so far, has been a considerable diminution in the receipts from customs dues. The auction sales tend, however, to some extent, it is thought, to reduce prices in the regular market, and the Porte hopes that by the injurious effect thus produced, or supposed to be produced, merchants may submit to the exactions of the Customs officials, rather than expose themselves to the loss and inconvenience of having their goods broken in bulk, and to the competition of the auction sales.

The Ribbon Trade.

In the ribbon trade, though the demand has lasted so long for cotton-shot satin and failles, with plain failles, these are expected to sell again, and most of the London houses have given repeat orders, the fact being that where regular lines are kept, as in these, it becomes a matter of course to sort them up when certain colourings are sold out; and being kept on the counter as standing articles, they are again and again taken by buyers, and thus continue to be in request. It would be found a difficult matter to light upon any makes that could be turned out so well by the Coventry manufacturers as the goods which are now selling, which are just of that character which they can turn out to the best advantage and most successfully compete with Swiss manufacturers, who have pushed them very hard of late years, even in this branch, a great advance having been effected in union goods, through improvements in the dyeing and general manipulation of the cotton, in which English manufacturers used certainly to excel in former years, though they find it most difficult to compete with foreign productions when in the form of all-silk goods, in which their trade opponents mostly excel, turning out an article that comes light to the scale per piece, and so containing but comparatively a small weight of silk, but which handles well and is smart-looking, firm, and smooth, from the fact of superior silk being used, which, although fetching a high price per pound, yet, on account of its great length in the skein when compared with coarse silk, enables comparatively cheap goods to be turned out from it, that make up by their crispness and general smartness what they are deficient in actual weight of material.

Dutch Textile Fabrics.

The Exhibition, at Amsterdam, has, during the past few weeks, been visited by large numbers of visitors from various parts of the continent, and the venture seems to be a success. Amongst the note-worthy exhibits, are the textiles of Dutch manufacture, particularly certain checked, printed and dyed tissues, specially intended for the Java trade. In a collection of reports by German consuls, just issued, is one which contains some interesting statements concerning the textile industries of the Netherlands. These industries are said to have made considerable progress in Holland last year although the trade returns showed a decline for the year in the export trade of Dutch textile fabrics. The number of hemp spinning and weaving mills was increased, and considerable and important improvements were made in the dyeing and other branches of the spinning and weaving industries. The diminished export of Dutch woven goods is attributed in part to "the over-production of the English weaving industries and the lower prices in England necessarily consequent thereon;" and, according to some of the Dutch Chambers of Commerce, in part to "the want of interest in native industry manifested by Dutch merchants." The latter, it is said, import the raw materials exclusively, *via* London, Bremen, and Antwerp, because the export trade of the East Indian ports is almost exclusively in the hands of English, Swiss, and German firms. It is said to be much the same as regards the Dutch export trade. The Netherlands manufacturer, it is argued, must on the one hand export his goods at his own risk, or on the other keep large stocks in the East, in order to develop a trade. To do this, larger capital than he can spare would be necessary. Moreover, the important imports of German textile fabrics, and especially Berlin clothing materials, are cited as a proof of the discomforture of this branch of Dutch industry. In the report of a Chamber of Commerce in North Brabant (Tilburg), it is observed that, in consequence of the new French general tariff, the manufacturers of woollen goods export very freely in anticipation of the new duties. Dutch manufacturers, however, in general, have since felt the influence of the new French duties very severely. In order to escape them, two Dutch woollen manufacturers, who had important trade relations with France, have closed their works in order to open new establishments on French soil, as others have done on German soil for a similar reason. It would appear, therefore, that the position of the Dutch textile industries is not very satisfactory, and is likely to be still further depressed by the extensions and improvements referred to.

ODDS AND ENDS.

It has been decided by the Chamber of Commerce, at Morley, near Leeds, to form, without delay, a Technical School in that place. The necessary arrangements for the commencement of classes are already in progress, and it is expected that the School will be in working order shortly.

* * * *

An improved steam engine in which the dead centre point is obviated has been patented by Mr. Carl Baumgarten of Berlin. A block is secured to the piston rod, which block is provided with a diagonal slot, through which the crank pin passes. The slot has concaved edges facing each other, and is provided with a recess at each end. The slide valve is attached to a rod provided at the lower end with tappets, against which the ends of the sliding block strike, thereby reciprocating the slide valve rod. The levers from which the rods are suspended are provided with spring arms for giving the desired degree of expansion.

* * * *

A novelty in ornaments and trimmings of chenille—for instance, such ornaments as branches and twigs of leaves and flowers, rosettes, hat bands, and other ornaments—has been patented by Messrs. George Dietzel and Samuel Green, of New York. The invention consists in ornaments formed of pieces of chenille having a varying diameter of wefts of different lengths, which pieces of chenille are secured to stems or branches. Overspun balls, pellets, beads, or tufts can also be suspended from the stems by means of cords in addition to the pieces of chenille.

* * * *

Shot silk, a fashion of the past, has been recently revived, and is now in the full tide of popular favour. Rare brocades carefully imitated from old pictures; velvets in combination with tulle; silks with velvets; laces of all kinds, and in rich profusion—all these in turn are or have been employed. The same rule of constant variety applies with yet more force to fringes and ornamentation. There is frequent variation in trimmings of all sorts. *Passementeries* and embroideries: the most elaborate applications of gold and silver, silk, beads and jet upon the most costly stuffs, have been and are nearly always in vogue.

* * * *

The *Bulletin des Soies* states that whereas Lyons turned out, in 1880, altogether 170,000,000 f. worth of cotton and wool mixed silk goods, the ensuing year only 155,000,000 f. worth were produced, and last year 134,000,000 f. The reasons given for the decrease are that the twist entering, to the extent of 50 to 80 per cent., into this manufacture is a great deal cheaper in Germany and England, that the general current of trade has been adverse to these goods, and that the English and Germans, by dint of greater activity, have been formidable competitors abroad, the more so as they receive better support in distant markets.

* * * *

The French Minister of Commerce has addressed to the Chambers of Commerce throughout France a circular dwelling upon the importance of establishing museums illustrative of the industrial and commercial condition of the various countries of the world. The Chambers are asked to offer their opinions upon the value of this means of stimulating and improving French commerce and industry. Whatever may be the motive for this extraordinary anxiety on the part of the French Government to extend the foreign trade of the country, the effort which has been just made by the Minister of Commerce is certainly deserving of serious attention.

* * * *

French journals, in discussing the advantages France may be expected to derive from the conquest of Annam and Tonquin, from a commercial point of view, arrive at the conclusion that, unless the intention of the Governmentis to establish a Protectionist Customs tariff in favour of French merchandise, the sacrifice of French money and soldiers will have been made in vain. The *Semaphore* of Marseilles maintains that the French colonies have hitherto been of no benefit to the mother country, and demands that the Government should now adopt a wise protectionist policy. In Cochin China, it says, few French imports find a market, while more than 50,000 tons of goods are imported every year from the English depôts at Singapore, or direct from England or Germany. It therefore demands that no free ports should be created, but that the markets should be reserved for French productions.

* * * *

The Manchester Technical School was formally opened on the 27th September, by Mr. Bernhard Samuelson, M.P., Chairman of the Royal Commission on Technical Education. The Technical School has grown out of the Mechanics' Institute, and—although formally opened on the above date—came into existence in December last. There was a large attendance at the opening ceremony, the chair being occupied by the President, Mr. Oliver Heywood, who described the manner in which the School was originally formed. Mr. Samuelson then addressed the meeting at some length. Other speeches were made by Mr. Swire Smith, Mr. Slagg, Professor Roscoe and Mr. Magnus, Technical Commissioners. The prizes, which had been gained by the students at the Government "Science and Art" examinations, the examinations of the "City and Guilds of London Institute," and the examinations of the "Union of Lancashire and Cheshire Institute" were then distributed by Mr. Samuelson. Votes of thanks to the Technical Commissioners and Chairman terminated the proceedings.

THE GAZETTE.

Adjudications of Bankruptcy.

Hirst H., Turnbridge Mill, Huddersfield, Yorkshire, yarn spinner.
Dunham F., Hill Street, St. Albans, Hertfordshire, hat manufacturer.

Liquidations by Arrangement or Composition.

Slaymaker R., 25, Aldermanbury, London, skirt manufacturer, &c.
Shipway T., and H. B. Woodrow, 5, Argyll Street, London, tailors.
Cooke Dan, Pingle Mill, Delph-in-Saddleworth, Yorkshire, shawl manufacturer.
Thomas A., 49, Aldermanbury, London, umbrella manufacturer.
Jones T., Cwmgwii Factory, Abergwilly, Carmarthenshire, woollen manufacturer.
Howse N., H. Earls, and A. E. Howse, Hopeville, Witney, Oxfordshire, warehousemen, &c.
Allen W. J., and E. W. Futvoye, St. John's Square, Clerkenwell, velvet workers.
Wood J , 4, High Pavement, Nottingham, lace manufacturer.
McKinley T., 49, Aldermanbury, London, umbrella manufacturer.
Baird H., 27, Granby Row, Manchester, skirt manufacturer.
Hart J. 8, Philip Lane, London, woollen warehouseman.
Lines W. C., Kidderminster, Worcestershire, carpet patterns designer.
Everett J. F., Sutton Veny, cotton manufacturer.
Spence W. F. H., Horsforth, woollen cloth manufacturer.
Hopwood G., Birtle-cum-Bamford, near Bury, power-loom cloth manufacturer.
Languer S., Falcon Square, London, hat manufacturer.

Dividends.

Fawcett W. L,, and R. Fawcett, Stourport, Worcestershire, carpet and rug manufacturers; a first and final dividend of 1s. 7d. in the pound, at the offices of Mr. G. K. Patten, trustee, 105, Colmore Row, Birmingham.
Maddocks Frances, 3, Allen Terrace, High Street, Kensington, Middlesex, mantle maker; a first and final dividend of 1s. in the pound, at the offices of J. F. Lovering, trustee, 77, Gresham Street, London.
Humphreys D., 15, Australian Avenue, London, mantle manufacturer; a first and final dividend of 3s. in the pound, at the offices of Mr. J. W. Close, trustee, 32, Park Row, Leeds, Yorkshire.
Town J., West Holme Street, Thornton Road, Bradford, worsted spinner; a first and final dividend of 2s. 4½d. in the pound, at the offices of Messrs. Tempest and Hewson, 2, Market Place, Bradford.

Dissolutions of Partnership.

Collier J., G. H. Hodgkinson, C. Roberts, and J. P. Staniar, Manchester, merchants.
Dawson T. C., and F. A. Davies, 3, Jewin Crescent, London, bonnet and shape manufacturers.
Pickard G., and D. Goode, Railway Buildings, Leicester, hosiers.
Thorpe W., and T. A. Drennan, Long Eaton, Derbyshire, lace manufacturers.
Whitehead A., and J. Fletcher, Leeds, Yorkshire, cloth manufacturers.
Shillingford R., and P. L. Whittet, 6, Honey Lane Market, London, fancy trimming dealers.
Elliott F. W., and G. H. Gregson, 30, Hall Ings, Bradford, Yorkshire, stuff merchants.
Robinson A., and G. H. Robinson, Albion Dye Works, Dudley Hill, near Bradford, Yorkshire, cotton warp dyers.
Naish A., H. T. Naish, and R. Castle, Castle Street, Bristol, hosiers and cotton manufacturers.
Crook T., A. Crook, and C. Crook, Healey Wood Mill, Burnley, Lancashire, cotton manufacturers.
White J. H., and J. L. Stagg, Alfred Street, Bow, indiarubber manufacturers.
Morgan T. W., and F. Duce, Hall Ings, Bradford, Yorks, job stuff merchants.
Shaw E., and E. A. Humphries, Kidderminster, Worcestershire, carpet manufacturers.
Watts G. F., and Sarah Cooper, Commercial Road, Middlesex, mat manufacturers.
Lockett C. C., and H. Lockett, underlinen manufacturers, St. Paul's Churchyard, London.
Ledward Thomas and Sons, cloth agents, Booth Street, Manchester.
Page Frank and Co., Carter Lane, London, ladies' linen and lace manufacturers.
Mullen M. and Co , stuff merchants, Booth Street, Bradford.
Edward T. L. and Son, Manchester, cloth agents.
Finlay, Robertson and Co., Liverpool, cotton brokers.
Ryley A. and Co., Liverpool, cotton brokers.

Bills of Sale.

	£	s.	d.	
Bailey J., Accrington, weaver	32	0	0	
Grave J., 146, Great Dover Street, Borough, drapers, &c.	69	0	0	
Gumbley J., Hyde Park Road, Leeds, woollen manufacturer	39	0	0	
Irving G., 59, Orlando Street, Bolton, draper	ass. fur. wife.			
Martin M., 89, Windsor Terrace, Padiham, late cotton manufacturer	51	14	10	
Moore Susanne, 3, Inkerman Terrace, Kensington, art needleworker	35	0	0	
Myers W., King Square, Goswell Road, fancy hat manufacturer	30	0	0	
Ogden T., 11, Bradshaw Street, Manchester, hat manufacturer	60	0	0	
Baldwin J., Luddenden Foot, Halifax, worsted spinner	2205	10	0	ind.
Baldwin J., Luddenden Foot, Halifax, worsted spinner	552	0	0	&c.
Carter J., and Jane Carter (his wife), Granville Street, Elland, woollen manufacturer	300	0	0	
Christie W. F. D., 38, Paulet Road, Camberwell, warehouseman	40	0	0	
Brock G. A., 24, City Road (By. &c.), warehouseman, &c.	29	18	0	i&r
Page F., 39, Sheen Park, Richmond, muslin manufacturer	300	0	0	
Say R. S., 3, Clifden Road, Lower Clapton, warehouseman	40	0	0	
Woodfield H., Court Road, Luton, straw hat manufacturer	40	0	0	
Rooms S., 37, Castle Street, Luton, manufacturer of bonnets	40	0	0	
Bolton J., 78, Montague Street, Blackburn weaver	40	0	0	
Hoyle J., Longwood, near Huddersfield, woollen manufacturer	indemnity,&c			

PATENTS.

Applications for Letters Patent.

Baling cotton and presses for the purpose. C. J. Ash, London. A communication — 5th Sept. 4262
Breaking and beating hemp, flax and other textile materials. J. C. Mewburn. A communication — 10th Sept. 4335
Checking the arrival and departure of employés. W. T. G. Ellis, Glasgow — 1st Oct. 4664
Cotton gins. H. J. Haddan, Kensington. A communication — 6th Sept. 4287
Cotton bale fastenings. H. Lindon, Liverpool — 8th Sept. 4323
Combing cotton and other fibres. W. Dobson, Douglas — 11th Sept. 4353
Cleansing, hot-watering, and soaping fabrics in calico printing and dyeing. D. Haworth and W. Hanson, Mottram — 14th Sept. 4405
Carding engines. Joseph Constantine, Heaton — 14th Sept. 4406
Colouring matters for dyeing and printing (preparation). A communication — 15th Sept. 4428
Compressing yarn when wound into cops, &c., for use in shuttles for weaving, and in the mechanism employed therefor. G. Duncan, Forfar — 26th Sept. 4583
Carrier mechanism, &c., of machines for knitting carpet or stair pads and other fabrics. J. Burdon and C. Till, Leicester — 26th Sept. 4590
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3854	3860	3861	3871	3881	3882	3896	3898
3899	3920	3828	3937	3938	3956	3962	3977
3982	3987	4006	4016	2364	2695	4030	4072
4075	4081	4102	4106	4113	4115	4122	4125
4142	4143	4147	4159	4076	3965	(All of 1883.)	

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Patents Sealed.

1223	1572	2096	1281	1413	1500	1534	2871
3180	3242	3473	3506	3509	1297	1742	1404
1408	1435	1436	1589	2107	2368	2861	3083
3169	1318	1444	1445	1476	1486	1719	2109
2383	3419	1531	1788	1978	3304	3655	1582
1583	1630	1648	1769	1852	1866	1974	3094
3188	3263	3400	1102	1655	1717	1888	3006
3177	1669	1711	1744	1751	(All of 1883.)		

Patents on which the Stamp Duty of £50 has been paid.

Cotton cords. J. Winter and T. Ivers, Farnworth 23rd Sept. 3855
Crochet-like edgings and pillars. J. Booth, New Basford 27th Sept. 3917
Dressing and beaming yarns. W. W. Urquhart and J. Lindsay, Dundee 9th Sept. 3660
Looms. A. F. Firth. J. Boothman, Bailiffe Bridge 29th Sept. 3944
Machines for reeling and testing materials. P. Lowe, Darwen 24th Sept. 3868
Piled fabrics. D. Scott, Manchester. 2nd Oct. 3992
Stitched machine belts or bands, &c. M. Gandy, Liverpool 18th Sept. 3797
Sewing machines. T. Chadwick, T. Sugden, and C. Shaw, Oldham 13th Sept. 3716
Sewing machines. H. Mills, Birmingham 22nd Sept. 3848
Spindle bearings of textile machinery. J. Elce, Manchester 29th Sept. 3945
Weaving reversible fabrics. A. Rothwell and C. H. Rothwell, Bury 29th Oct. 4420

Patents on which the Stamp Duty of £100 has been paid

Lubricants and packings for steam-engines, &c., and covering for steam boilers, &c., and for parts of machinery liable to friction, &c. H. P. Scott and B. H. Zerbe, Bow 28th Sept., 1876 3773
Metal rollers for printing calico, &c. H. Wilde, Manchester 12th Sept., 1876 3569
Winding hosiery yarn, and apparatus therefor. H. G. Warburton, Leicester 12th Sept., 1876 3580

Copyright of Designs.

(Registered during September, 1883.)

Class VI., Carpets.

403,112-19 H. R. Willis and Co., Kidderminster.
403,282-90 T. B. Worth, Stourport.
403,392-93 The Heckmondwike Manufacturing Co., Heckmondwike.
403,517 W. Green and Sons, Kidderminster.
403,604-12 J. Williamson and Son, Lancaster.
403,682-84 Cooke, Sons, and Co., London and Liversedge.
403,901 A. F. Stoddard and Co., Elderslie.
403,907-909 A. F. Stoddard and Co., Elderslie
403-969-77 Cooke, Sons, and Co., London and Liversedge.
404,097-119 T. B. Worth, Stourport.
404,120 Wells and Le Motté, Camberwell.
404,331-36 H. R. Willis and Co., Kidderminster.
404,392-402 T. B. Worth, Stourport.

Class XI., Furnitures.

403,082 R. Dalglish, Falconer and Co., Manchester and Glasgow.
403,242-44 Susmann, Simon and Co., Manchester.
403-245 S. and C. Nördlinger, Manchester.
403,281 S. and C. Nördlinger, Manchester.
403,327-28 W. Watson and Co., Manchester.
403,443 The Kralingsche Katoenmaatschappij, Rotterdam.
403,444 S. and C. Nördlinger, Manchester.
403,501-508 D. Lee and Co., Manchester.
403,525-28 The Rosendale Printing Co., Manchester.
403,648-55 Tootal, Broadhurst, Lee and Co., Manchester.
403,715-18 The Rosendale Printing Co., Manchester.
403,798-801 Salis Schwabe and Co., Manchester.
403,897-900 R. Dalglish, Falconer and Co., Manchester and Glasgow.
403,904 Jeffrey and Co., Islington.
403,941 The Kralingsche Katoenmaatschappij, Rotterdam.
403,942-43 The Rosendale Printing Co., Manchester.
403,944 Thomas Hoyle and Sons, Limited, Manchester.
404,169 Thomas Hoyle and Sons, Limited, Manchester.
404,170 Morris and Co., London.
404,190 R Dalglish, Falconer and Co., Manchester and Glasgow.
404,225-27 Thomas Wardle, Staffordshire.
404,228-30 The Rosendale Printing Co., Manchester.
404,379-80 S. and C. Nördlinger, Manchester.

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Contents.

Notices.

The Half-Yearly Subscription—payable in advance—including home postage, is 3s. 6d., Cheques and Post Office-Orders to be made payable to H. & R. T. Lord, 3, Gerrard Street Halifax.

The Publishers will be happy to receive intimations of New Inventions, Patents, &c.

The Publishers are open to receive from Designers, Original Designs of Carpets, Damasks, Tapestries, Linen, Cretonnes, &c., and such as are accepted will be published with the Designers name affixed. All Designs sent for approval must be 10 inches long by 7 inches wide for single page, and for double page, 16 inches by 10 inches, and must be accompanied by Postage Stamps sufficient to pay return Postage in case they are rejected.

Literary communications must, in all cases, be accompanied by the names and addresses of the writers, not necessarily for publication, but as evidence of authenticity.

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To prevent any misunderstanding, all Articles sent to the *Journal of Fabrics and Textile Industries* for publication will be considered as offered *gratuitously*, unless it be stated explicitly that remuneration is expected.

Readers are invited to forward items of interest to the Trades concerned.

The Proprietors will feel greatly obliged if any of their readers, in making enquiries of, or opening accounts with, Advertisers in this paper, will kindly mention the *Journal of Fabrics and Textile Industries* as the source from whence they obtained their information

French versus English Designs.

AT the recent distribution of prizes at the School of Art, Southampton, Mr. Henry Lee, M P., speaking, as a Manchester merchant, of the importance of greater attention being given to technical education, said "that our best designs for calico-printing come from France, which ought not to be the case." There is a great prejudice in favour of French designs, and too little disposition on the part of calico printers to look at anything produced by an English artist. It would be absurd to deny that the French designs for calico-printing are not superior to the general run of English ones, but we think sufficient encouragement is not given designers here to induce them to make calico-prints a speciality in their studios. A designer calls upon a printer and offers his productions for sale. He meets with a reply something after this fashion, "We buy our designs in Paris," or "Our Mr. So-and-so has just returned from Paris," or, perhaps, "Mr. So-and-so is just going to Paris," anyway, Paris comes in so frequently, that the visitor feels no great joy in making these calls upon calico printers, so he turns his attention to "Fresh fields and pastures new" where he can sell his designs, if they have any merit in them at all. From many years' experience in these matters we venture the opinion that in some branches of the textile trades the French are not equal to the English designs. In carpets, for instance, judging from the great number of patterns we have seen—and these have been numerous enough to form a correct estimate that great artistic spirit, which ensures success in calico prints, is strongly against success in carpets, because there is too much attempted where there is a limit to the attainable. They aim too high and miss the mark altogether. We have seen scores of designs for carpets drawn by some of the leading Frenchmen, which, when put to practical work, had to be subjected to re-construction or simplification to fit them for the purpose for which they were intended, with this result—the beauty which was depicted upon the paper was lacking in the fabric—in short, the effect produced was inferior to that usually attained by a firm's own designers. Not long ago, we had a conversation with a Manchester calico printer, who said "he had never come across a single Englishman who could compete with a Frenchman in designing for his class of goods." In any other branch of textile manufacturing we have designers who can successfully compete with Frenchmen; and we feel quite assured that manufacturers, with this single exception, can run along and hold their own with any other nation in the matter of designs, without assistance from across the channel. It is an admitted fact that we have first-class designers, as our American cousins have testified by the number of English artists whom they have imported into the United States. We are of opinion that if we cannot produce good designs for our Manchester printers, the fault lies in a great measure with themselves, they might, long ago, have made some exertion to bring about a better state of things, and their efforts would, no doubt, have been met by equally vigorous attempts on the part of designers not to their own advantage merely, but more especially to that of the calico printers. Now that a technical school has been founded in the Cotton Metropolis and is working well, we hope the subject of designing will be brought prominently to the front, and that it will be encouraged in every possible manner, not alone by the ruling powers of the school, but by each one who has even the smallest amount of influence at command, and the smallest interest in the calico printing industry, and then in a short time we may be able to say that our best designs for calico prints *do not* come from France.

Producing Figured Designs on Fabrics by raising the Pile.

In producing designs on materials such as velvets and similar fabrics, many processes have been given in our pages during the past two years, some of which have been the subjects of patents, and others, methods in common use amongst makers of raised figured pile fabrics. A process, used by a firm of manufacturers in the north of France, and which has been patented in various countries, may be new to our readers. The apparatus used is not of a complicated nature; it consists of a continuously revolving card cylinder, acting on the fabric, which fabric is moved constantly over an edge presented towards the card, so as to raise a pile or nap on the material, and between it and the revolving card cylinder is interposed a thin sheet of metal or other suitable substance, travelling at the same speed as the material, which sheet is perforated like a stencil plate with the required figures or designs of the pile that is to be raised. The card is thus permitted to act only on those parts of the material that are exposed through the perforation. The stencil sheet may be an endless web, of a flexible material, made to travel over guide rollers uniformly with the travelling fabric; or it may be a cylindrical metal shell of a diameter somewhat more than double that of the card cylinder which revolves within it, the axes of the two cylinders being so situated that the travelling fabric is tangential at the same point to both of them. With the stencil sheet or cylinder and the card cylinder may be combined a shearing apparatus to cut the raised pile to uniform height. There is thus produced in a continuous manner a velvet or piled surface figured according to the design of the perforated part of the stencil sheet or cylinder, such figuring being produced either in raised or sunk designs, or in bright and dull effects according as the fabric may be prepared beforehand, by wetting or otherwise.

A Long Studied Problem Solved.

(THE RHEA FIBRE.)

WE have, from time to time, drawn the attention of our readers to the Rhea or Ramie fibre, as being of great value in the production of textile fabrics. But hitherto its one great drawback has been the difficulty which has always existed in the separation of the fibre from the stems and bark. The first fibre from the Rhea plant was sent to this country in 1810, but, except as a material for cordage purposes, no particular notice was taken of it for some years. During the past fifteen or sixteen years many attempts have been made to invent some machine or process suitable for separating the fibre from the stems and bark of the plant in its green state. None, however, proved of any commercial value, and in 1869 the Government of India took the matter up, and offered prizes of £5,000 and £2,000 for the two best machines, the merits of which were to be tested in India, the principal condition being that the fibre worth £50 per ton in England should be produced at a cost not exceeding £15 per ton in India. No fewer than 32 entries were made for the trial, but only one, a Mr. Greig, put in an appearance. The fibre produced by his machine was declared in the London market as to be only worth £28 per ton, and unfit for textile purposes. A donation of £1,500 was awarded in recognition of the merits of his machine. In 1875 the Indian Government again offered similar prizes, and under similar conditions to those of 1869, seven competitors finally appearing at the trial. The highest value attached to any of the samples produced in the competition was £26 per ton, and therefore the full amount of the prizes was withheld, and only in three cases were smaller prizes awarded. In 1881 the reward was again offered without any practical success. Various attempts have been made in other directions to solve this problem. Machines were patented in 1871 by Mr. Adolph Blanchard, of New Orleans; in 1873 by M. Emile Tefrane, of New Orleans; and in 1874 by M. Felix Roland, of Paris. The Acclimatisation Society of France, in 1882, granted the large gold medal, placed at its disposal by the Minister of Agriculture, to M. Berthel for a machine which strips and prepares the fibre in its green state. The name of M. Favier has on more than one occasion appeared in our pages in connection with attempts to utilize the Rhea fibre, and it is to him that the credit of important success in this direction is said to be due. In 1882, says *The Times*, M. Favier discovered that, after steaming the plant, the fibre and its adjuncts were easily stripped from the wood. This process being still insufficient, as it only delivers the fibre in ribands, with its cementitious matter and outer skin attached, the whole case was submitted to the distinguished French chemist, Professor Frémy, member of the Institute of France, who is well known for his researches into the nature of fibrous plants and the question of their preparation for the market. Professor Frémy thoroughly investigated the matter from a chemical point of view, and at length brought it to a successful and, apparently, a practical issue.

One great bar to previous success would appear to have been the absence of exact knowledge as to the nature of the constituents of that portion of the plant which contains the fibre, or in other words, the casing or bark surrounding the woody stem of the Rhea. As determined by Professor Frémy, this consists of the cutose, or outer skin, within which is the vasculose containing the fibre and other conjoined matter known as cellulose, between which and the woody stem is the pectose or gum which causes the skin or bark as a whole, fibre included, to adhere to the wood. The professor, therefore, proceeded to carefully investigate the nature of these various substances, and in the result he found that the vasculose and pectose were soluble in an alkali under certain conditions, and that the cellulose was insoluble. He therefore dissolves out the cutose, vasculose, and pectose, by a very simple process, obtaining the fibre clean and free from all extraneous adherent matter ready for the spinner. In order, however, to insure as a result a perfectly uniform and marketable article, the professor uses various chemicals at the several stages of the process. These, however, are not administered haphazard or by rule of thumb, as has been the case in some processes bearing in the same direction, and which have consequently failed in the sense that they have not yet taken their places as commercial successes. The professor, therefore, carefully examines the article which he has to treat, and according to its nature and the character of its components he determines the proportions of the various chemicals which he introduces at the different stages. All chance of failure thus appears to be eliminated, and the production of a fibre of uniform and reliable quality removed from the region of doubt into that of certainty. The two processes of M. Favier and M. Frémy have therefore been combined, and machinery has been put up in France on a scale sufficiently large to fairly approximate to practical working, and to demonstrate the practicability of the combined inventions. The experimental works are situated in the Route d'Orleans, Grand Montrouge, just outside Paris, and a few days ago a series of demonstrations were given there by Messrs. G. W. H. Brogden and Co., of Gresham House, London. The trials were carried out by M. Albert Alroy, under the supervision of M. Urbain, who is Professor Frémy's chief assistant and co-patentee, and were attended by Dr. Forbes Watson, Mr. M. Collyer, Mr. C. J. Taylor (late member of the General Assembly, New Zealand), M. Barbe, M. Favier, Mr. G. Brogden, Mr. Caspar, and a number of other gentlemen representing those interested in the question at issue.

The process as carried out consists in first treating the rhea according to M. Favier's invention. The apparatus employed for this purpose is very simple and inexpensive, consisting merely of a stout deal trough or box about 8 ft. long, 2 ft. wide, and 1 ft. 8 in. deep. The box has a hinged lid and a false open bottom, under which steam is admitted by a perforated pipe, there being an outlet for the condensed water at one end of the box. Into this box the bundles of rhea were placed, the lid closed, steam turned on, and in about twenty minutes it was invariably found that the bark had been sufficiently softened to allow of its being readily and rapidly stripped off by hand, together with the whole of the fibre, in what may be called ribands. Thus the process of decortication is effectively accomplished in a few minutes, instead of requiring, as it sometimes does in the retting process, days and even weeks, and being at the best attended with uncertainty as to results, as is also the case when decortication is effected by machinery. Moreover, the retting process, which is simply steeping the cut plants in water, is a delicate operation, requiring constant watching, to say nothing of its serious inconveniences from a sanitary point of view, on account of the pestilential emanations from the retteries. Decortications by steam having been effected, the work of M. Favier ceases, and the process is carried forward by M. Frémy. The ribands having been produced, the fibre in them has to be freed from the surrounding mucilaginous secretions. To this end, after examination in the laboratory, they are laid on metal trays, which are placed one above the other in a vertical perforated metal cylinder. When charged, this cylinder is placed within a strong iron cylinder, containing a known quantity of water, to which an alkali is added in certain proportions. Within the cylinder is a steam coil for heating the water, and steam having been turned on, the temperature is raised to a certain point, when the cylinder is closed and made steam-tight. The process of boiling is continued under pressure until the temperature—and consequently the steam pressure—within the cylinder has attained a high degree. On the completion of this part of the process, which occupies about four hours, and upon which the success of the whole mainly depends, the cementitious matter surrounding the fibre is found to have been transformed into a substance easily dissolved. The fibrous mass is then removed to a centrifugal machine, in which it is quickly deprived of its surplus alkaline moisture, and it is then placed in a weak solution of hydrochloric acid for a short time. It is then transferred to a bath of pure cold water, in which it remains for about an hour, and it is subsequently placed for a short time in a weak acid bath, after which it is again washed in cold water and dried for the market. Such are the processes by which China grass may become a source of profit alike to the cultivator and to the spinner. A factory situate at Louviers has been acquired where there is machinery already erected for preparing the fibre according to the processes we have described, at the the rate of one ton per day. There is also machinery for spinning the fibre into yarns. These works were also visited by those gentlemen who were at the experimental works at Montrouge, and who also visited the Government laboratory in Paris, of which Professor Frémy is chief, and M. Urbain *sous-chef*, and where those gentlemen explained the details of their process, and made their visitors familiar witn the progressing steps of their investigations.

The Jacquard Machine: Its History, Construction, and Use.

The opening lecture in the Textile Industries' department of the Yorkshire College at Leeds was given a few days ago, by Mr. J. Beaumont, on "The Jacquard Machine:—its History, Construction, and Use." He said that considerable progress had been made during the present century in the manufacture of textile goods. This progress had been accelerated by the invention of improved machinery employed in the various processes of manufacturing worsted, woollen, cotton, silk, and other woven fabrics. Though it would almost appear impossible, by the agency of the rude machinery used by our forefathers, to make any material advances in the manufacture of textile goods, and especially in the production of figured or elaborate woven designs, yet on close examination of some of the old tapestries on the walls of Hampton Court and other places, or of some of the best designs woven on the draw-loom, they were bound to acknowledge that even in those days the designer showed considerable ability in the grouping of figures and arrangement of colours. The workman also must have taken great pains and exercised much patience when it sometimes took days, and even weeks, to make as much cloth as we now produce in as many hours. But since the old distaff has been replaced by the hand-jenny of Hargreaves, the hand-jenny by the mule of Crompton, the original hand-loom by the fly shuttle, the fly shuttle by the power-loom of Dr. Cartwright, and the ancient draw-loom by the invention of Joseph Marie Jacquard, the progress has been marked, rapid, and decided in almost all classes of woven goods. In short, the inventions enumerated denoted a complete change in the productions of the loom, and, coupled with other improvements which had followed in this class of machinery, placed both the designer and manufacturer in such a position as to enable skill and taste to be brought to bear upon the weaving of figured goods to almost an unlimited extent. To the invention of the Jacquard loom we are indebted for the removal of the limit to the practical execution of certain large designs, for this loom had the peculiar characteristic that it might be so enlarged in its weaving capacity as to admit of the production of a design almost of any dimensions. Joseph Marie Jacquard, the inventor of the harness loom which bears his name, was born at Lyons on the 7th of July, in the year 1752. His father was an overlooker in a manufactory of gold, silver, and silk goods, while his mother followed some subordinate occupation in connection with weaving. The son, at an early age, showed signs of a mechanical turn of mind, but he was apprenticed to a bookbinder. A brief study of the machinery he had to follow daily led him to consider the possibility of simplifying its construction, as it was almost as laborious and monotonous to attend to, and work, as the draw-loom of his time. When Jacquard was about twenty years of age, his father died, and succeeding to a little property, he ultimately decided on renting a small weaving shed, where, it is said, he formed the plan for constructing a loom that would

admit of the most complicated patterns being woven, without the aid of the draw-boy. He was on the eve of making his invention public when the Revolution of 1789 broke out, and he, along with his eldest son, then but a very young man, joined the Republican forces, and assisted in the defence of Lyons against the army of the Convention. As soon as his career as a soldier was brought to a close he endeavoured to enlist the sympathies of the weavers of the silk trade of Lyons in his invention, but met with discouragement and rebuffs on every side, until a few of his friends and patrons succeeded in obtaining a place for his machine in the Paris Exhibition of 1801 A bronze medal of the lowest honour, coupled with a humble position in the Conservatory of Arts and Machinery, was the only good the inventor derived from this exhibit. Whilst in his new sphere of labour, he had time and opportunity to improve several minor matters in connection with his loom, and to bring it more publicly before manufacturers. The result was that he gradually succeeded in getting its merits acknowledged, and began to pave the way for its adoption in the silk trade. Jacquard, at this time, also, took out a patent for his invention. It was no uncommon occurrence, however, for his looms to be dragged down and utterly destroyed, while the Trades Council of the city of Lyons ordered the models to be publicly burnt; but it is worthy of remark that some years after this event, to compensate for the injustice done both to his genius and character, the inhabitants of Lyons, by public subscription, erected a statue of Jacquard on the very spot where these disgraceful transactions took place. Opposition was also encountered from the weavers, who thought the looms might supersede hand labour; but as a knowledge of the true merits of the invention spread this treatment died out, and the good points of the loom were generally recognised. In 1808 Napoleon Bonaparte awarded Jacquard an annual pension of 3,000 francs, and he enjoyed this until his death, in 1834. Before this time the loom had been adopted in many of the principal seats of the figured textile industries of Europe, and many manufacturers had gained large fortunes by the production, through this agency, of beautiful fabrics The Jacquard machine was more favourably received in England than in France, and was first employed by the silk manufacturers of Spitalfields and Coventry in 1823-5. The manufacturers of Yorkshire were rather later in adopting it; but in 1827 it was said to have been employed in the damask trade of Halifax, and in 1831-2 by the stuff manufacturers of Bradford. There was even greater indifference at Huddersfield, but this arose from the fact that they had amongst them an admirably constructed machine, which gave the designer a scope of 180 threads of warp for a figure, and as many slays as one wished to employ. The immense scope of the Jacquard, however, brought it eventually into favour, and the firms that adopted it soon felt its influence. Although the machine had now been in use for sixty years, the principle on which it operated remained the same; in fact, the plan of its construction was so simple and complete, that it would be almost impossible to make its action more comprehensive. It was well known that where reduced to a minimum working power each needle would lift a separate thread, and every thread in this way would act its individual part in the formation of a design—a method unattainable in any other machine. The mention of such a loom implied the use of a perforated cylinder, card harness mountings, and an arrangement of wires for actuating the harness, which gave the loom the broad weaving capacity for which it has been so long esteemed. It had not only enriched textile fabrics in designs, but reduced the price of figured goods; and, though designed for the silk trade. there was scarcely any branch of loom production which it had not benefited.

Indian Weaving.

An attempt is about to be made to revive the Oriental Art of weaving, and to restore to it some of its pristine excellence. Messrs. Stapleton and Co.. of Agra, have issued a circular soliciting patronage for the productions of a factory which they are about to establish for the special purpose of weaving Persian carpets and similar hand-woven textures. The finest materials only will be used, and the patterns supplied will be from among the following, which are purely of Oriental origin:—Those given in Mr. Vincent Robinson's great work on "Eastern Carpets" will be freely used; while others, such as the "fish, or old Persian" with cock's eye border; the Taj (a copy of the inlaid flowered work on the tomb in the Taj Mabal, Agra), &c., will also be placed under requisition. By using nothing but Indian dyes and fast colours, it is hoped that the old excellence of native work, such as was attained, for instance, by the Kasgar weavers in the 17th Century will be attained again. The services of an experienced Spuiaggur dyer have been secured to further assist in the laudable task of combating against the deteriorating influences of the productions of the gaols.

In a certain manufactory not long ago, a weaver delivered a piece of cloth to the manager, who upon inspection found two small holes in it. The manager informed the weaver that the usual penalty would be imposed, viz., two shillings. Here the weaver ventured to inquire if the usual fine was a shilling for each hole, large or small. "Yes," replied the manager. "Then," said the weaver, as he tore the two holes into one, "there's a shilling saved anyway."

Scotch, Irish, and Swiss Embroidery Goods.

THE trade in embroidery goods, which, at one time, was almost exclusively in the hands of British manufacturers, and which could have been retained by them, has, for some years past, been one of the leading industries in Switzerland. The *Warehouseman*, in an article on the subject, says:—Some years back, a considerable trade used to be done in what are technically called Scotch sewed muslins, or white embroidery goods, which consisted mainly of cambric caps, frock-bodies, ladies' collars, cuffs, &c. At one time, from its birth nearly, every child had its little head covered with one of the first-named, and those who could afford it used to lavish no inconsiderable sums upon the purchase of handsome cambric caps, which were sometimes of French cambric and at others of Scotch cambric, more or less hand embroidered. But it was found that children were healthier with uncovered heads, and these caps gradually died out of use, so that none now are called for; though other kinds of embroidery goods are still in active demand.

The principal seat of this kind of industry was at Hamilton, near Glasgow, and at other places in North Britain, and the work afforded the means of a comfortable maintenance in many instances, and of partial maintenance in others, to numbers of cottagers, many of the wives and daughters of artisans, colliers, and others finding a useful source of employment in this branch, which supplemented their weekly receipts very considerably.

The same may be said in a lesser degree of Ireland, a good many embroidery goods being turned out at one time in the North, and especially Belfast, whose embroidered cambric handkerchiefs, worked in the corner, together with other ranges of goods similar in character to those we have named, and muslin trimmings—that is to say, insertions, and scallops—being a considerable branch of business. Another branch, that of tambour-work, used successfully in *appliqué* net goods—muslin upon net—was also extensively worked at Hamilton, and the Scotch and Irish trades combined afforded constant employment to great numbers of women.

The Swiss, however, who paid great attention to this branch as being one that would allow of the goods being carried a long way for a small charge for transport, which is one of the difficulties they have to encounter in their export trade on account of their inland position, brought out machines to do this needlework, instead of being performed by hand, while in some cases machine work was supplemented by hand work; the union of the two resulting in the production of goods of a showy character at extremely low rates. and these have ousted British productions in this line almost entirely out of the market.

It is now about thirty years since Swiss embroideries of different kinds first began to take a firm hold of the market in this country, though this branch of industry was founded in some of the Swiss cantons about 130 years ago. What is called the "chainpoint" embroideries (something after the fashion of the tamboured goods we have spoken of as being produced at Hamilton (are mostly produced in the cantons of St. Gallen and Appenzell, and thirty years ago, and for some years afterwards, gave rise to an extensive trade in England in long and short muslin curtains, evening dresses, &c., the curtains being commonly known as "Swiss curtains" in the trade, and these stopped the sale, to a considerable extent, of the better class Scotch muslin curtains, called "harness books;" but the Swiss muslin curtain was in turn displaced by the Nottingham lace curtains, consequent upon the artistic class of goods turned out by the Nottingham curtain frames, the extinction of this branch being at one time threatened. Great efforts were, however, made by originality of design and various combinations to keep the trade alive, which were successful, a great many good being taken by the United States; and it is precisely this want of effort on the part of native manufacturers which we have to deplore, for, doubtless, the Scotch tambour workers, if they had supplemented their work with hand labour and by other con-

trivances, might have retained a useful branch of manufacture to themselves. In this branch the Swiss workers use small single-needle machines at their own homes, taking out the stamped patterns from the so-called manufacturer or wholesale dealer, which gives work to about 3,000 people in the cantons of Appenzell and St. Gallen.

But the most important branch is the flat point or machine embroidery, in which about 45,000 workpeople are engaged, the annual value of whose labours is estimated to amount to £3,200,000, no inconsiderable sum for one industry in a small country like Switzerland, the greater part going, perhaps, to the United States just now, though considerable quantities have been imported into England. The sale, however, during the past three or four years has been a good deal interfered with by the thick imitation embroidery trimmings that are now turned out at Nottingham, otherwise a larger quantity still would have been wanted.

Large and complicated machines are employed in this branch, one of which, as we have mentioned upon a previous occasion, was worked on the premises of Messrs. T. Lindsay and Co., of Belfast, which the late Mr. Thomas Lindsay was good enough to show us upon one occasion, which was manipulated by a Swiss workman; but these machines have not been resorted to to any extent in this country.

The manufacture of St. Gallen employ a considerable number of hands in this outdoor work, who use small single-needle machines at their own homes in the Austrian Vorariberg, just in the same way that Coventry ribbon manufacturers used to employ largely—and now do to a smaller extent—outdoor weavers to weave up the silk that is given out in warps on rolls or blocks for them to weave down. Great attention has been paid to the workmanship and finish of the various kinds of embroidery turned out in Switzerland, so as to keep the trade moving and in their own hands, a large quantity of muslin trimmings having been sent to England in the form of insertions and scallops from Herisau, where they also turn out very handsome curtains, some of the best of which, at prices ranging from 15s. per pair to £30 per pair, are sent to the United States, the large hotel proprietors being, perhaps, the best customers for these classes of goods; and with the leaning of late towards the consumption of embroidery goods by ladies, this division in Switzerland has been enjoying unusual prosperity

It must, however, be a matter of regret with reflecting Englishmen interested in the success of national manufacture, that this branch has been allowed to die out, or very nearly so, in this country, where the same casualities threatened the extinction of the branch as in Switzerland by the increasing use of larger machines; the trade being renewed there and stimulated by greater originality of design and superiority of workmanship, resulted in the production of fabrics of such excellence as caused an increase, instead of a diminished demand The class of work, too, is of that description which can be followed at home and would supplement the earnings of those members of the family either engaged as labourers or artisans, an economical feature that is far too much lost sight of in this country, where the list of home industries is year by year diminishing in number, though these are more calculated to secure self-reliant habits on the part of the people and regular home comforts, than the factory system, which takes away, in too many instances, the women who ought to stay at home and make her husband and children's home comfortable, and under which, though the earnings may be at times comparatively large, they are gained frequently at the cost of unthrifty habits, the recipients dissipating their wages very often in a kind of barbarous luxury for the first two or three days after their receipt, and existing in a state of semi-starvation and discomfort during the remainder of the week.

Oxalic Acid in Bleaching.

"The march of improvement, in the processes of bleaching vegetable fibres has hardly kept pace with that of dyeing," says one of our exchanges. Indications that it will do, ere long, are not wanting; but as yet we go on much in the old way. We get rid of the impurities, natural and otherwise, by prolonged boiling in soda-lye. We follow this with our bleach proper, consisting of solutions of chlorinated lime (chloride of lime), at first concentrated, then weaker and weaker. We alternate these with the scouring, somtimes with sulphuric acid, sometimes with hydrochloric, and with baths of soda-lye. The acids set free the chlorine of the solution of chlorinated lime, which saturates the fibres, and combine with the lime, while the lye serves to neutralize the otherwise destructive action of the acid. During these operations the tissues are washed many times with the largest possible quantity of water. Improvements in these operations can not come too soon. At present they are costly and inconvenient. The water must be heated. The capital required for the first installation is considerable, and even with the best tools and appliances, the time taken up, and the amount of hand-labour required, are also great. In order to lessen the inconveniences, Mr. C. Beyrich, of Arnsdorf, Silesia, has proposed a process based on the three following points: 1. That oxalic acid, either free or as the oxolate of potassa, possesses the property of combining with the lime of the chlorinated lime more energetically than either or both of the acids commonly used in bleaching. 2. That the oxalic acid never attacks the fibre as do the other acids. 3. That the presence of vegetable substances, which, under the common system, are removed before the bleaching proper, does not interfere with the action of oxalic acid. Of the three substances which compose chlorinated lime, but one, hypochlorite of lime, may be said to be of practical value in bleaching. Instantly deprived of its lime in presence of oxalic acid, the hypochlorous acid is set free, and almost immediately decomposed; its two constituents, chlorine and oxygen, being in the nascent state, act with redoubled energy; the oxygen directly on the colouring matter, the chlorine indirectly through the decomposition of of water. The cloth to be bleached is soaked at a temperature of from 20° to 20° C., for five or six hours in a bath of chlorinated lime, to which oxalic acid has been added. All of the oxalic acid is not introduced at once, the great part being thus used, and the remainder in an hour or two. After bleaching, the goods are carefully rinsed and passed through a weak solution of sulphuric acid, then through one of sodic carbonate to neutralize the acid, and finally rinsed and dried.

The objections to the process, on the score of the expense of the oxalic acid would probably not hold were a demand created for the acid. The materials of which it is made are comparatively cheap, the methods of manufacture simple, and stimulated by the demand, active competition would reduce cost. It must not, however, be forgotten that the oxalate of lime formed on the fabric is one of the most insoluble salts known. For scouring, many bleachers prefer hydrochloric acid to sulphuric acid, because the resulting salt is so readily washed out. They would find the oxalate of lime more objectionable than the sulphate, because of its greater insolubility. The invention is a move in the right direction, and as such, it is deserving of a fair trial both with and without modifications which will readily suggest themselves to experienced hands.

A New American Loom for the Manufacture of Carpets, Plushes, &c.

Some hints, in reference to an improved loom for the manufacture of upholstery goods, which is intended to eclipse any mechanism now working, are given by a contemporary. We look forward with interest for particulars of an apparatus which "will cause a complete revolution in the manufacture of the above classes of goods." The paper in question says:—"American inventive genius has again triumphed, and a small sample loom, recently invented, is now at work, not a hundred miles from New York city, turning out an entirely new grade of American upholstery goods, which have been pronounced by experts to be far ahead of anything yet seen in the way of furniture coverings, and especially adapted for use in railway and street cars. The new goods have the general appearance of fine Body-Brussels, and some grades for upholstering street cars, &c., are as strong and almost as heavy as Body-Brussels, though they will sell for about 60 cents per yard, 27 inches wide. They can be made either wool or silk-faced and in any design, colour or weight, either as fine as silk tapestries or as heavy as Body-Brussels. They are perfect in finish, and it is predicted by the inventor and his associates that they will cause a complete revolution in the manufacture of upholstery goods, The inventor also promises to make a superior line of plushes. There have been tens of thousands of dollars spent in experimenting upon plushes in this country, but many more tens of thousands must be spent before a silk plush is produced in this country, that is equal to the imported article. There are some superior Mohair plushes of home manufacture at present on the market, but there is a vast difference between a silk and a Mohair plush. One of the peculiarities of the new invention is that it can be readily changed in a Body-Brussels loom. A large consumer is said to have agreed to take 30,000 pieces of the new upholstering material, and its proprietor promises great things for it in the future. We are requested not to name any of the parties concerned at present, but in a future number we shall be able to give our readers further and more interesting particulars."

The Sudden Changes in Fashions.

SOME very sensible remarks, and such as may fitly be taken advantage of by manufacturers of all classes of textile fabrics in England, was recently made by a contemporary, in urging the makers of knit goods to diversify their productions in such a manner as to create in a more or less degree, a demand for their fabrics. "The natural and certain remedy for over production in any line of industry, is diversification of that industry. If a country grows so many cereals that farmers cannot obtain remunerative prices for their products, the right thing to do is for some of them to cultivate some other product of which the supply is not so redundant. If manufacturers of low-grade fabrics find their market overloaded, the wise thing for some of them to do, is to begin to make fabrics of higher grades. The tendency, of course, is always to do this, but the movement is likely to be a slow one, because each man waits with the hope that his neighbours will make the change, with all the trouble and expense, leaving him to go on in the old and easy way. An accident sometimes makes the movement rapid, but such accidents are rare. The knit-goods industry had the benefit of one, in the sudden development of the Jersey trade. The Jersey fashion came along at a time when the knitting industry was suffering from a severe depression which really began to be alarming. There were men in the business who could see nothing ahead of them but complete stoppage of their mills but the creation of an extraordinary demand for Jersey fabrics drew off from the manufacture of ordinary goods scores of men who had found business dull, and so reduced the total out-put of such goods that the supply was not more than equal to, if indeed equal to, the demand. Every man in the trade fully realises the nature of the benefaction thus conferred by this unexpected freak of fashion, and every man, therefore, can readily perceive how any tendency to diversify an industry, benefits everybody in that industry, whether it is he who goes in the new way, or he who stays in the old." In the production of goods of any class it behoves the manufacturer, if he wishes to be successful, to keep a sharp eye on the slightest tendency that may be apparent at any time of a change in the designs, colourings, qualities, and makes of fabrics, and to instantly take advantage of a sudden departure as far as it lies in his power, in order to reap a quick and remunerative harvest, and at the same time, to be ready for the next freak of fashion. Whilst doing this, it will not be wise on his part to altogether discard the manufacturing of goods that have had a fair run, as it is often the case that goods which are to a certain extent out of fashion are still selling on a limited scale in districts that are as a rule some months behind the fashionable world in the wearing of their materials. It is a well known fact that retailers of textile fabrics of various classes in some districts are considerably later in exhibiting to their customers new goods than they are in others. This fact should be borne in mind by manufacturers, especially those who do a direct trade with the retailer.

Fashionable Patterns and Colours.
For Worsted and Woollen Fabrics.

The assortment of patterns of various designs, shades and colourings now being shown in the manufacturers' and merchants' warehouses, is largely on the increase. It is now a very difficult matter for the producers of these goods to keep well up to the times, in consequence of the fashions for nearly all classes of goods changing so suddenly. In fancy fabrics, perhaps, the greatest novelties are in woollens and velveteens, but there is also a fair demand for other classes of goods. The fashion magazines contains descriptions of wearing apparel made from almost all the shades in colouring and varieties of material imaginable. In worsted and woollen goods, small checks and plaids are fashionable, and the impression is that they will continue in favour for some time to come; small stripes and dotted effects are also in demand, but in a lesser degree than the checks and plaids. The modified arrangement in colours, we stated in our September number, would be a feature in next year's goods, is already taking effect. In the worsted branch, the light-twilled patterns are likely to have a run for some time, judging by the favour they are at present receiving; both for coatings and trouserings, they will meet with a fair demand, for the former, a moderate inquiry is already being made for indigo blue, but the principal inquiries are made for black goods of fine quality. We may endorse what was stated in a former number, that the finer qualities of fabrics, both in worsted and woollens, are likely to meet with the greatest demand, as less inquiry seems to be made for the lower qualities of goods. Manufacturers should make a note of this fact, and act accordingly. In trouserings and suitings, the following varied combinations of colourings, will, undoubtedly, be used for some time:—Blue and red, green and red, blue and yellow, black and white; blue, russet and red, dark blue, light blue and old gold, cyprus-green; old gold and crimson, cyprus-green, bright blue and green; dark blue, crimson, pale blue and russet; cyprus-green, dark blue, crimson, and yellow; dark blue, crimson, and white; black and blue check with cross bars of red or yellow; yellow and dark blue checked with pale blue and red, &c. Black checked with a dark colour is traversed by speckled lines of a brighter shade, while broken checks are made up of thick single threads worked into dark coarse cloths. In nearly all qualities of suitings and trouserings, a considerable admixture of silk will be made in many fabrics, as it is found that it enhances the effect of many patterns considerably. Many of the designs that are given in our Journal, will, if worked by designers in the pattern loom, give them a good idea of fabrics which are likely, in the future, to be amongst those prevailing in fashion, and we strongly advise their use in this manner, as it will be a good guide to them in producing new patterns for ensuing seasons.

Woollen Turkish Towelling Materials.

A leading novelty in new fabrics, which, at present, is being used in a variety of ways, is the new Turkish woollen towelling materials, a description of which is given by a Parisian correspondent, which may be summed up as follows:—A few seasons ago, cotton tissues of a somewhat similar make were brought out. The looped pile, which gives it its name, is not covered symmetrically all over the material, but is cut up into small geometric patterns. Although it has only just been put upon the market, many different kinds of cloth are to be seen, and they seem to meet with a ready sale. It is mostly in one colour —deep crimson, or slate grey, perhaps—the looped pile forming a trelliswork all over it; there the ground is woven in broken plaid or zigzag in two colours, green and red or blue and brown, one or the other predominating, while tiny designs or tufts of loops are scattered all over at intervals, the colour chosen for the tufts being the one least conspicuous in the ground; finally, there is the striped and plaid Turkish towelling, which is more or less covered with looped pile, and cut up into plaids or stripes, the loop matching the ground beneath. There are very pretty arrangements of this in fawn and brown, claret, and cyprus-green, blue and dull yellow, &c.

These materials are manufactured more expressly for tunics, for which its softness and pliability suits it peculiarly well, but vests and even entire bodices can be made of it. In the case of the towelling with a broken plaid or zigzag pattern upon it, tissue of a similar kind, minus the tufts, is produced for combination with it; the tunic being made of the figured, and the skirt and bodice of the relatively plain. The plaid, striped, and self-coloured towelling, covered with a general looped pile or a geometric design, is mostly combined with plain Vicugna cloth, the tunic alone being made of the former with, perhaps, a narrow vest and the kilted skirt and jacket of the latter.

So far, there are to be no ready-made gowns or skirts of of this material at the drapers', who have hitherto contented themselves with selling it in the piece and making attractive shows in the windows, showing off the fabrics in the arrangement and folds it is likely to assume when made up. The best couturiers, however, look upon it as one of the important innovations of the winter as regards walking gowns and costumes.

ORIGINAL DESIGNS.

On the first plate is given a design which is intended as a suggestion for a Quilt, but is also suitable for a variety of other fabrics. It will make an admirable design for a Tapestry Antimacassar. As a Linen or Damask Table Cover, it will be effective, providing the floral centre is turned half around, making the present side the bottom of the pattern. This pattern is designed by Mr. R. T. Lord, 3, Gerrard Street, Halifax.

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A design for a Brussels Carpet and Border, with a Stair Carpet to match, forms the subject of our second plate. This pattern lends itself readily to any of the styles of colouring now so popular. As a four-frame Carpet, in a Moresque effect, it will look well in the following colourings :—Black, olive, green, gold, crimson, and pale blue; the two latter colours being planted in one frame. Mr. R. T. Lord is also the designer of this pattern.

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*** We beg to inform Manufacturers and others that adaptations of Designs, published in the "Journal of Fabrics and Textile Industries," can be made at the Office by experienced Designers, and that Original Designs can also be furnished at moderate charges.

Prize Competition.

The whole of the worsted, woollen, and other cloth designs sent in for the September Competition, have been carefully gone through, and the adjudicators have made the awards as follows: First Prize, £2; Charles Roberts, Dumfries. Second Prize, £1; F. Umpleby, Batley. Third Prize, 10s.; Thomas Ballantyne, Junr., Dumfries.

MONTHLY TRADE REPORTS.

Wool.—In nearly all branches of the wool trade an improved business has been done during the month. In the Scotch districts, stocks, that have been on hand for some time, have been sold at an advanced rate, and the tendency of prices continued slightly upwards until the close of the month, when trade became rather slacker, owing to the stiff rates asked for wools in greatest demand. In the Yorkshire districts, trade has also been brisk, with advancing prices, but the firm rates asked have had a tendency to curtail business, to some extent, after users of wool had satisfied their requirements for a short time. A demand for lustre wools has arisen, much to the satisfaction of manufacturers of lustre fabrics, this branch of trade having been in an indifferent condition for some time past. Wools have, on the whole, risen from ½d. to 1d. per lb. in price. The yarn and piece branches, are fairly good, and the outlook is promising, especially in the home departments.

Cotton.—The state of the market has not been of a very encouraging character, the demand for the raw material during the earlier part of the month was good, still spinners and manufacturers were not sanguine of the yarn and piece trade improving in consequence. The slight advances asked by spinners for yarns met with no response, and business was, therefore, checked, and has continued of a dragging character. The demand for nearly all classes of goods has been poor, and manufacturers find themselves in a very unsatisfactory position. As a rule, they are working without any remuneration for their outlay or capital.

Woollen.—The woollen trade has not shown many signs of alteration since our last report. In the Scotch, a fair business has been passing, and prices have kept firm. In Leeds, trade has been somewhat quieter in most branches. An improvement has taken place in the demand for low makes of overcoatings and for heavy tweeds. The goods commanding most attention are fancy worsteds, coloured tweeds, serges, twills and ladies' ulster cloths. Prices for all classes remain firm. In the Huddersfield districts, business has improved slightly, although it is still in anything but a satisfactory state. The trade with the United States and Canada has been fair, but with the continent it has been unsatisfactory. Prices have kept steady.

Linen.—This branch of industry has been in a satisfactory condition in most departments. The demand, both for home and export account, has increased, and rates have been firm. As a rule, especially in the Scotch districts, manufacturers are fully employed. In the jute branch, considerable activity has characterised the markets, and prices, in consequence, have favoured sellers.

Carpets.—In the Scotch districts, a fair business has been passing, at fairly remunerative rates. In the Kidderminster district, trade has been brisk, and the tone generally good. Most of the manufacturers have orders on hand to last them from two to three months, and the outlook for the future is brighter than for some time past. The designs, now being brought out excel anything previously attempted in the carpet trade, and reflect the greatest credit on the producers of them.

Lace.—There have been but few signs of improvement in the lace trade during the month. Many of its branches are in the same flat condition that has existed for months. In the curtain branch, a rather better feeling has been experienced but without any appreciable increase in business. In two or three varieties of laces, a fair business has been done, but, as a rule, at unremunerative prices. Silk goods have been slow of sale. The hosiery branch has been fair, but orders have been given out too sparingly to keep machinery fully employed.

Commercial Failures.

According to *Kemp's Mercantile Gazette*, the number of failures in England and Wales, gazetted during the four weeks ending Saturday, October 27th, was 643. The number in the corresponding four weeks of last year was 817, showing a decrease of 174, being a net decrease, in 1883, to date, of 454.

The failures were distributed amongst the following trades; and for comparison, we give the number in each, in the corresponding weeks in 1881 and 1882 :—

	1883	1882	1881
Building Trades	72	86	95
Chemists and Druggists	6	5	10
Coal and Mining Trades	17	9	10
Corn and Cattle	16	15	27
Drapery Trades	35	72	72
Earthenware Trades	6	4	6
Farmers	25	43	56
Furniture and Upholstery Trades	6	16	13
Grocery and Provision Trades	141	190	180
Hardware and Metal Trades	23	37	16
Iron and Steel Trades	23	33	26
Jewellery and Fancy Trades	34	25	26
Leather and Coach Trades	39	42	41
Merchants, Brokers, and Agents	48	92	74
Printing and Stationery Trades	7	12	15
Wine, Spirit, and Beer Trades	75	68	86
Miscellaneous	70	68	93
Totals for England and Wales—	643	817	846
Scotland	92	68	52
Ireland	18	10	21
Totals for United Kingdom—	753	895	919

The number of bills of sale published in England and Wales for the four weeks ending Saturday, October 27th, was 934. The number in the corresponding four weeks of last year was 3,202, showing a decrease of 2,268, being a net decrease, in 1883, to date, of 28,884.

The number published in Ireland for the same four weeks was 50. The number in the corresponding four weeks of last year was 112, showing a decrease of 62, being a net increase in 1883, to date, of 55.

QUILT.

ORIGINAL DESIGNS.

For Winter Season, 1884.

Coating or Suiting.

No. 111.

Design.

4,200 ends in the warp.
70 inches wide in loom.
60 ends per inch.
15's reed.
4 ends in a dent.
60 picks per inch.
56 inches when finished.
Warp and weave in order given.

Warp:

20 skeins—1 Black and Tan or Black and Drab.
„ 7 Black.

8 threads in pattern.

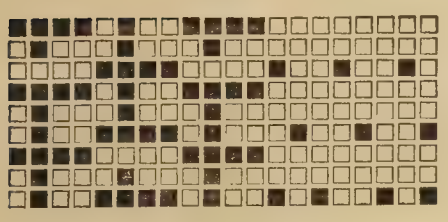
Weft:

20 skeins—1 Black and Crimson.
„ 1 Black or Dark Bottle Green.
„ 1 Dark Drab or Olive.
„ 1 Black or Dark Bottle Green.
„ 1 Dark Drab or Olive.
„ 1 Black or Dark Bottle Green.
„ 1 Dark Drab or Olive.
„ 1 Black or Dark Bottle Green.

8 picks in the round.

Winter Trousering.

No. 112.



Design.

Weft:
1 Very Dark Blue or Black
1 Black woollen.
1 Very Dark Blue or Black.

3 picks.

Worsted at the length, 2/36's.
Face woollen „ 16 skeins.
Backing „ „ 20 „

Warp:

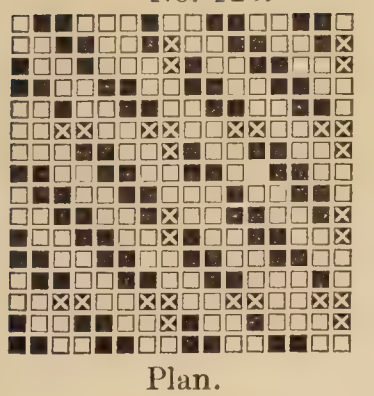
4 Black worsted or Blue.
4 Dark Blue worsted.
2 Very Dark Blue „ or Black.
1 Black woollen.
3 Very Dark Blue worsted, „
1 Black woollen.
3 Very Dark Blue worsted, „
1 Black woollen.
1 Very Dark Blue worsted „
2 Black worsted.
2 Bright Blue worsted. „
4 Dark Blue „
2 Very Dark Blue „ „
1 Black woollen.
3 Very Dark Blue worsted, „
1 Black woollen.
3 Very Dark Blue worsted, „
1 Black woollen.
1 Very Dark Blue worsted, „

40 threads.

4,488 ends in the warp.
66 inches in the loom.
17's reed.
4 in a split.
102 picks per inch.
56 inches when finished

Cheviot Suiting.

No. 113.



Plan.

Warp:

1 Black and Blue twist.
1 Olive 2-ply „
2 Black and White „
2 Olive 2-ply „
2 Black „ „
1 Black and Scarlet „
1 Olive 2-ply „
2 Black and white „
2 Olive 2-ply „
2 Black „ „

16

16's reed Scotch count
9's „ Yorkshire count.
3 threads in a dent.
27 threads per inch in warp.
27 picks per inch.
70 inches wide in loom.
56 „ „ when finished.
Cheviot finish.

Warp and weft yarns: All 24 cuts twist.

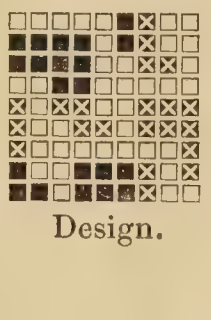
Weft:

1 Green and Scarlet twist.
1 Brown 2-ply „
2 Black and Light Drab „
2 Brown 2-ply „
2 Dark Green 2-ply „
1 Black and Yellow „
1 Brown 2-ply „
2 Black and Light Drab „
2 Brown 2-ply „
2 Dark Green 2-ply „

Fancy twist in warp and weft marked ⊠

Suiting.

No. 114.



Design.

Warp.

1 Black and Brown twist.
2 Black.
3 Dark Grey.
3 Medium Grey.
3 Black.
1 Black and Blue twist.
2 Dark Grey.
3 Medium Grey.
3 Black.
3 Dark Grey.
1 Medium Grey.
1 Crimson and Green twist.
1 Medium Grey.

27

Weft.

3 Black.
3 Dark Grey.
3 Brown.

Warp and weft yarns:
Black.
Dark Grey.
Medium Grey.
Brown.
} 30 cuts.

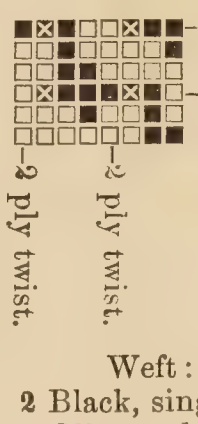
18's reed Scotch count.
10's „ Yorkshire Count.
6 threads in a dent.
60 „ per inch in warp.
70 picks per inch.
70 inches wide in loom.
56 inches when finished.
Clear finish.

Black and Brown
Black and Blue
Crimson and Green
} 60 twists.

Black in warp and weft marked ⊠

Stripe.

No. 115.



2 ply twist.
2 ply twist.
2 ply twist.
2 ply twist.

Weft:
2 Black, single.
1 Olive 2-ply twist.
2 Black, single.
1 Black 2-ply twist.

Warp and weft yarns: Black, single, 24 cuts.

Warp:

2 Black, single.
1 Black cotton.
1 Black 2-ply twist.
2 Black, single.
1 Black cotton.
1 Black Grey 2-ply twist.
2 Black, single.
1 Black cotton.
1 Black and Crimson twist.
2 Black, single.
1 Black cotton.
1 Black Grey 2-ply twist.

24

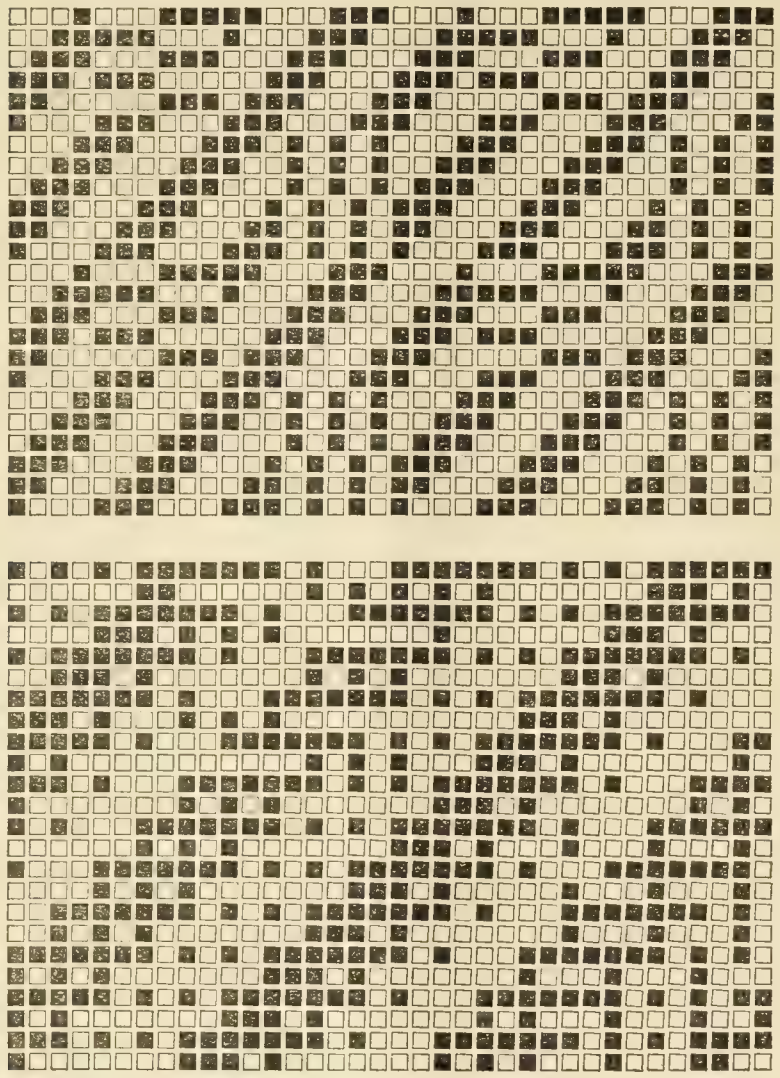
Black 2-ply
Black Grey 2-ply
Olive 2-ply
Black and Crimson
} 24 cuts twisted.

Cotton 6's, single.
In this pattern the *cotton* does not show on the *face* or *back*, but works in centre to give weight.

18's reed Scotch count
10's reed Yorkshire count.
4 threads in a dent.
40 „ per inch in warp.
42 picks per inch.
72 inches wide in loom.
56 inches when finished.
Cheviot finish.

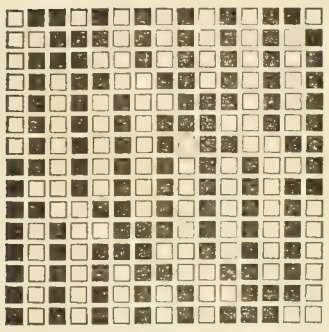
Worsted Coating.

No. 116.



Design. (*Bottom.*)

Pegging Plan. (*Bottom.*)

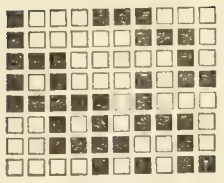


This Plan is also suitable.

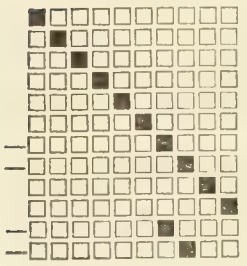
Warp: 2/36's Black worsted.
Weft: 1/18's Black worsted.
Reed, 22's Scotch count.
,, 12's Yorkshire count.
8 threads in a dent.
96 threads per inch in warp.
96 picks per inch.
66 inches wide in loom.
56 inches when finished.
Clear finish.

Trousering.

No. 117.



Design.



Draft

Warp:

6 Dark Olive	2/36's	worsted.
2 Light Blue	,,	,,
2 White	,,	,,
2 Light Blue	,,	,,
6 Dark Olive	,,	,,
2 Light Blue	,,	,,
2 Orange	,,	,,
2 Light Blue	,,	,,

24

Weft: Saxony 580 yards per oz.
1 Dark Brown.
1 Light Bronze Green.
1 Light Yellowish Drab.

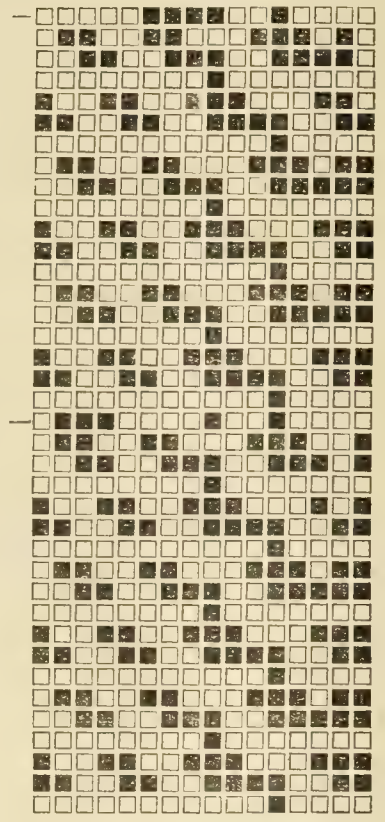
Light Blue to be put in as marked —

137 porters.
74 picks per inch.
24's reed Scotch count.
6 threads in a split.
70 inches wide in loom.
56 inches when finished.

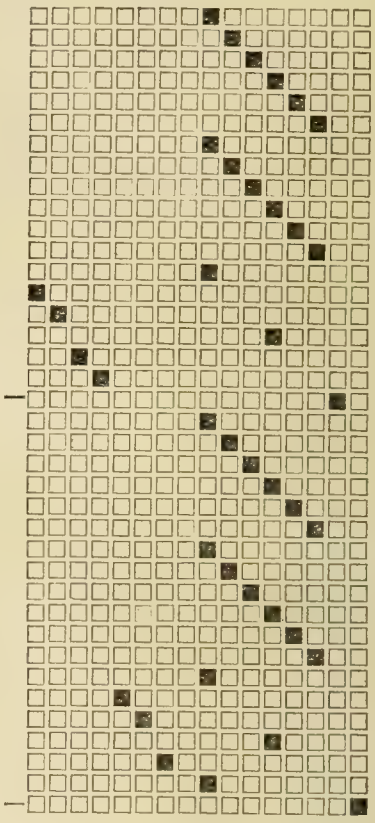
Suiting.

No. 118.

Design.



Draft.



Warp:

3 Black, single.
3 Black and Lavender twist.
3 Black and Light Olive twist.
3 Black, single
3 Black and Light Olive twist.
3 Black and Lavender twist.
1 Crimson 2/36's worsted, single.
3 Black, single.
3 Black and Lavender twist.
3 Black and Light Olive twist.
3 Black, single
3 Black and Light Olive twist.
3 Black and Lavender twist.
1 Light Brown 2/36's single.

38

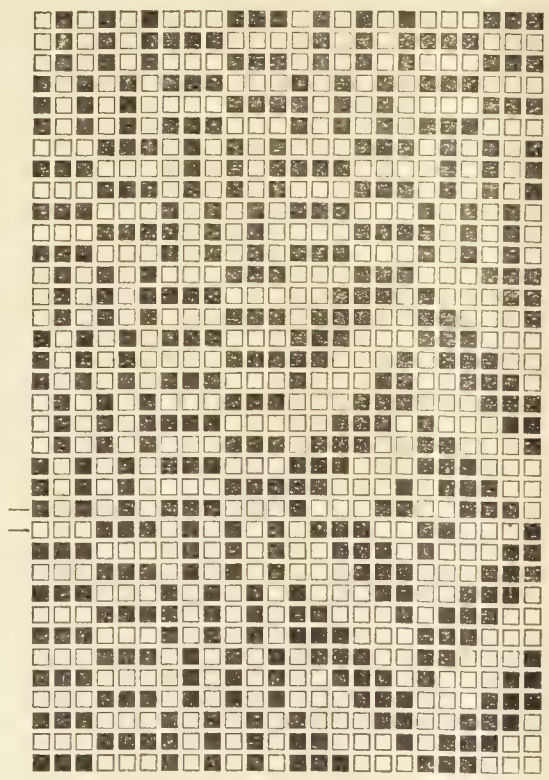
Weft to be the same as warp.
Single yarn 350 yards per oz.
Twist to be equal to single.

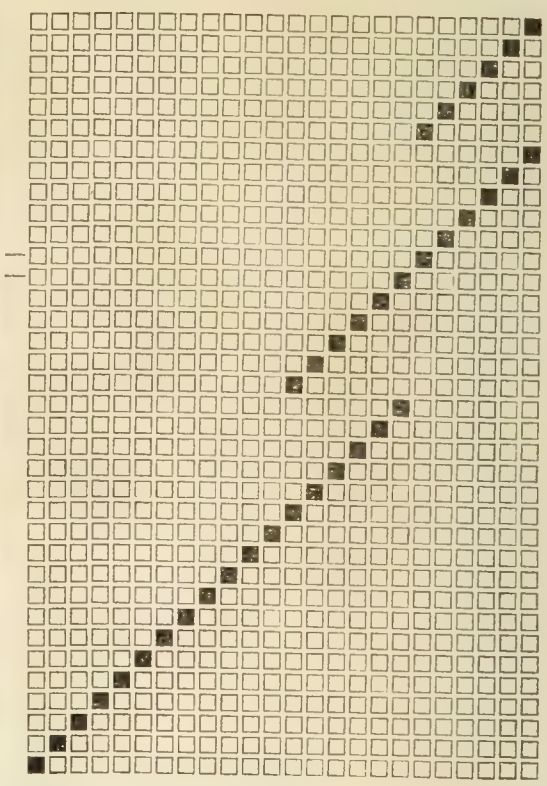
Fancy colour to be put in plan and draft as marked —

54 threads per inch.
60 picks per inch.
16's reed Scotch count.
6 threads in a split.
72 inches wide in loom.
56 inches when finished.

Coating.

Design. No. 119. Draft.





Warp: 11 Black 2/36's.
2 Dark Grey ,,
23 Black ,,

36

Weft the same as warp.

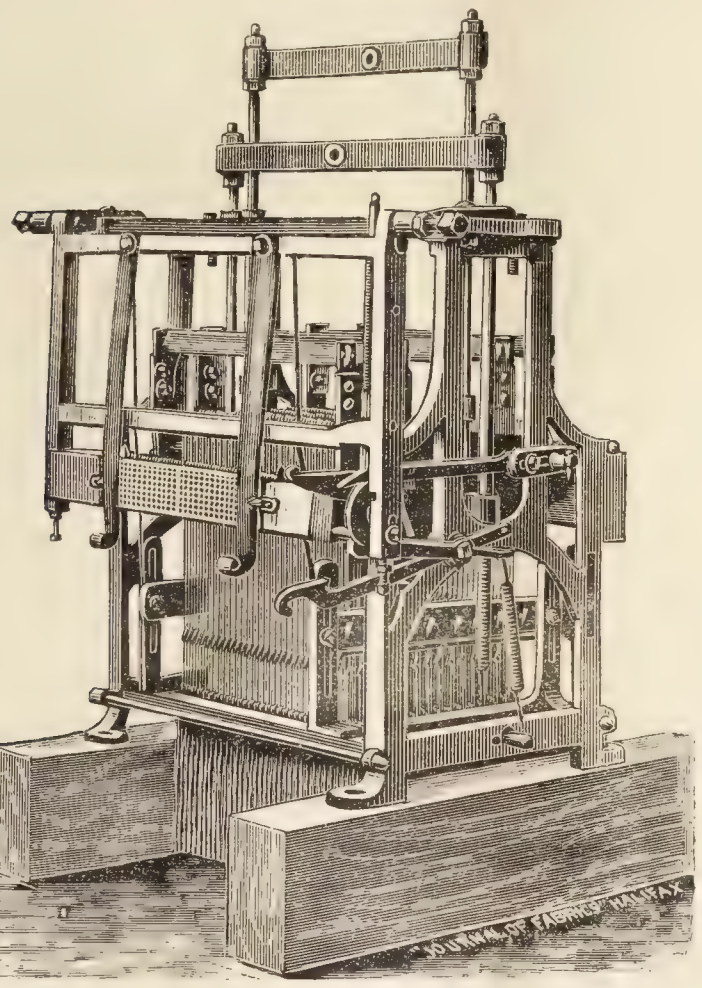
60 threads per inch.
64 picks per inch.
18's reed Scotch count.
6 threads in a split.
66 inches wide in loom.
56 inches when finished.

The Dark Grey to be put in as marked —

MACHINERY, TOOLS, &c.

An Improved Jacquard Machine.

An improved jacquard machine has, within the past few weeks, been patented by Messrs. Isaac Thomis and M. Priestley and Co., jacquard machinists, Copley Street, Southfield Lane, Little Horton, Bradford. It has already been taken advantage of by manufacturers of figured and other goods of various kinds. This machine will undoubtedly satisfy the requirements of the large section of those, interested in the textile branches of our industries, who desire to weave a variety of patterns, without a great many of the inconveniences which exist at the present time. It is suitable for the weaving of nearly every class of fabric, and more especially for those in which very heavy lifts are generally required. In the weaving of the following goods, it will be found to act admirably :—Worsted coatings, matelasses, damasks, tapestries, cotton goods, plushes, silk goods of all descriptions, muslins, &c. Its greatest advantage lies where there is a warp face. In its action, it has a rising and falling shed, as is the case in an ordinary plain loom. In working on any description of piece goods, it can be run at a much greater speed than by the apparatus generally in use, and if it be required to weave very heavy lifts—say 4 and 1 or 7 and 1 warp face—the end requiring to be up will remain in that position during any number of picks ; by this means a great economy is effected by saving the friction of the warp thread, which must occur when it is raised during each pick. The machine, in its construction and working, is very simple. In giving the following description and illustration, we presume that



those of our readers who are interested in jacquard machines understand the mechanism of those in general use. In this apparatus no alteration is required in order to work the machine, either in the cards or in the design, as it has only the ordinary row of neck bands, needles, and uprights. In the upright under the needles there is placed an ordinary hook, and when the upright is lifted, this hook rests upon a bar, providing it is not required to descend for the next pick. If it be required to descend, the blank in the card actuates the bottom part of the upright and presses it from the bar, this causes it to descend with the grade that is coming down. The apparatus can also be set to " dwell up " in any part of the shed above the centre, or to allow it to descend to the middle, thus having the shed level. Manufacturers generally, and especially those providing their own power, will find a considerable saving effected by the use of this " jacquard." A most decided advantage will be gained where heavy work is done, as the patentees of this machine guarantee that it will work easier, and at the same time as satisfactorily as any apparatus in the market. We have seen the jacquard at work on various classes of goods, and to us it is, in every way, successful. The pieces have an improved appearance in the loom. A decided advantage is secured to those changing their looms from figured to plain or twill goods, as they can twist the warp in and then weave one or two plain, twill, or figured pieces without inconvenience, and by this plan save the time required when having to prepare a new warp for each cloth, or having to purchase and fix extra healds. The harness used is guaranteed to last, on an average, at least three times as long as in any apparatus now in use, in consequence of its working at only half the speed usual in jacquards, and at the same time the working of the threads unnecessarily is saved. The machine, which works admirably, can be seen at the address of the makers, Messrs. M. Priestley and Co., as given above, who will give full particulars on application.

Hebblethwaite's Improved Driving Belts.

(THE LEVIATHAN BELT.)

Various materials have from time to time been used in the construction of belts, specially adapted for the driving of textile and other machinery, with more or less success, both as regards the first cost of the belt and its succeeding utility and economy in its continued use. An improved combination driving belt was patented a few months ago, by Messrs. Hebblethwaite Bros., of Threadneedle Street, Huddersfield, which consists of a flax, hemp, or cotton belt to which is secured a leather belt—the two forming one complete belt, which has the double advantage of great strength and the freedom from stretching or elongation under tensional strain when in continued use, and has also the well-known " grip " or clutching qualities of leather. In the construction of the belt, the leather portion is fixed on the inside or driving face of the belt in order to give the above desired advantage on the driving pulley, and the woven portion forms the outer part, so that the tendency that belts have generally to stretch is reduced to a minimum. In uniting the two belts—that is, the leather and the woven material—the ordinary process of stitching or rivetting may be employed at the option of the user, with equal advantages in both cases. The belts have been thoroughly tested during the past few months, and have been found to answer the purpose of driving large powers most admirably, and have stood some very severe tests recently. Five of the belts have been used at the Fine Art and Industrial Exhibition at Huddersfield, for main driving purposes, and have proved of great service. Messrs Hebblethwaite have had belts made on their improved principle in various widths and lengths ; and we have no doubt they will be glad to give every opportunity to users, of testing their capabilities on machinery of any description.

Machine for Measuring and Stamping Rolls of Cloth, Carpets, Velvets, &c.

In a former issue, we gave particulars of an improved appliance for the measuring and stamping of rolls of fabrics. Since this description was given, a controversy arose in many parts of the textile districts respecting short lengths in fabrics, or what was popularly known as "trade customs." When these difficulties arise, it is usual to throw the blame on the manufacturers. Those complaints have been circulated in foreign countries, and as a result, have done much damage to the trade of this country. It has been found that when merchants competed for a large order of goods, a great many were under estimated in consequence of short lengths or " trade customs " being applied. In order to obviate this difficulty and to establish a regular method of selling goods of all classes, and shirtings in particular, with a standard measure of 36 inches to the yard, a machine has been invented by a Manchester firm. There can be no doubt that this patent only wants to be thoroughly known to be appreciated. Every five yards of the cloth or other material is stamped on the margin, and any number of yards may be counted at a glance. Another useful feature of the machine is that it can not only be applied to measuring 36 inches to the yard, but that quarter yards may be shown if necessary. The machine is very simple, cloth, carpets, velvets, or anything else of a like nature being placed on a cylinder and wrapped over, at the rate of 40 to 50 revolutions per minute. The figures, which are on a brass disc cut out from the solid, and worked by a cam, fall at every five yards on to the cloth, and on their way down are supplied with ink from a roller. It may be mentioned that the measurement cannot possible get wrong, from the fact that at every revolution of a certain wheel the disc containing the figures marks a distance of five yards, and it may also be stated that no damage is done to the fabric by the impress of the figure. The cloth goes over a measuring drum such as is used by doubling machines, and it can be applied to any textile machine where the measurement drum is used. The utility of the invention may be gathered by taking an 80 yards roll of lining as an illustration. As is well known the difficulty of a person unrolling a piece in order to test the measurement is immense, but by using the new machine the exact number of yards may be told at a glance without fear of error. The general adoption of this machine will at once end all disputes as to the lengths of fabrics sold.

Effect of Light on Fabrics.

In a treatise in the *Central Blatt für Textil Industrie*, Dr. Kollar refers to the general subject of light as affecting the processes of textile manufacture, and incidentally calls attention to the different effects on colours produced by gaslight and electric illuminations. In view of the rapidly extending application of electricity to the purpose in question, he dwells upon the importance to the dyeing industry of this fact.

As to the question of natural light, he states that when the vital conditions of organisms are spoken of light is always understood to be one of them; and in the consideration of chemical combinations its influence is always taken into account, light being capable of causing decompositions and conbinations. The experience which has been the most fully made as to the influence of light on colours is, that numerous colours, if exposed to the light for a certain length of time, suffer in their intensity to such a degree that the original colour itself cannot always be recognized. Although this effect may partially be attributed to the action of the oxygen in the air, it is evident that this agent is not the sole cause of the effects produced, because experience has proved that colours which will fade in the light are well preserved when kept from its action.

Of exceptional importance, from a practical point of view, is the appreciation of the effects of light upon salts of silver, the property which they possess of becoming violet, and subsequently black when exposed to the air, being a fundamental principle of modern photography. Dr. Kollar urges the advisability of investigations being made as to the susceptible properties of other salts in the same manner, with a view of arriving at the foundation of a system of printing colours by light upon woven tissues. He calls special attention to the properties of chromic acid salts as applicable to the purposes indicated, and also to the relative effects of yellow and red chromate of potassium. Reference is made to the description given by B. Karl (in Muspratt's "Chemistry") of a method in which this principle is carried out. A tissue saturated with chromate of potassium is placed under an opaque tablet in which a design has been cut out. On the open places a genuine pale red tint is produced, while the soluble chromate of potassium is easily washed out from the other portions of the tissue. A white drawing on a coloured ground results, if an opaque object (for instance a leaf) is placed upon a transparent glass tablet, and the tissue saturated with chromate of patassium is placed under the glass.

Herr Grüne has carried his researches further, and they have passed the experimental stage, assuming a distinctly practical form. The following receipt is quoted by Victor Joclét in his handbook of "Wool and Silk Spinning:"—"120 grammes (·264 of a pound) of the red chromate of potassium, are dissolved in one kilo 2·20 lbs.) water, and to the latter 60 grammes (·132 of a pound) of sulphuric acid are added. White bleached woollen or silk tissues steeped in the solution, then dried in a rather dark room, and afterwards exposed to the direct sunlight, gradually acquired a colour after about ten or twenty minutes, the shade developed being a light brown. Prussiate of potash produced a medium blue colour."

According to the same authority, Herr Grüne has discovered that the strongest shades in buff, blue, green, and grey, are produced by the ferrocyanide combinations, while chromic acid salts produce brown, violet, black, olive green, &c.

For blue, the goods are impregnated with a solution of—

60 grammes (·132 lb.) of potassic ferrocyanide.
80 ,, (·176 lb.) of tartaric acid.
24 ,, (·052 lb) of pink salt.

After a short time (according as the solution was made with more or less water) light and medium blue shades are developed by sunlight.

For green the following solution is used—

60 grammes (·132 lb.) of yellow prussiate of potash.
40 ,, (·088 lb) of sulphuric acid.
40 ,, (·088 lb.) of sal ammonica.

Buff can be produced by the blue shade produced being passed through a caustic alkali dye, by means of which the blue is destroyed and oxide of iron remains. Grey colours are obtained by the chamois shade when produced being passed through a bath of gall-nuts, logwood, &c.

Should silk tissues impregnated with chromate of copper be exposed to direct sunlight, brown gradations of shades are obtained, which, by different coloured baths, can be transferred into shadings of grey, violet, black, and brown. Chromate of alumina gives the same results, only they are distinguished from those obtained with chromate of copper by greater purity and vivacity in the tone of the colours.

It is finally remarked that, in the production of all these colours, the presence of moisture in the materials to be dyed by sunlight is necessary. The simplicity and cheapness of the production of such colours is perhaps not yet sufficiently appreciated, and the hope is expressed that the principle described may find more general adoption, in consequence of the publicity thus given them.

Attention is called to the fact that chromates have the property of rendering tissues waterproof. A solution of gelatine, containing 2 to 2½ per cent. of chromate, can be used in the finishing and waterproofing of linen, silk, and cotton materials. If a tissue saturated with a solution of this kind, and then dried, is exposed for a short time to the light, it is rendered perfectly waterproof. Dr. Kollar thinks that this property of the chromic salts is capable of being utilized for many important purposes.

Velvets, Reps, Carpets, Rugs, &c.—Improved Apparatus for their Manufacture.

A French improvement in the mechanism for the weaving of velvets, reps, &c., and which may also be applied in the manufacture of carpets, rugs and such like fabrics, will prove of interest to makers of these materials in England. The principal advantage claimed by the patentee, is that the product of the loom can be varied, whilst the relative actions of its parts remain the same, by varying the number, position and quality of the warps, and the order of working them. There are three sets of warp threads; those of the first set, pass through the interstices of a stationary reed; those of the second, through eyes of a set of needles projecting upwards through a frame in front of the reed; and those of the third through eyes of needles projecting from a frame behind the reed.

Both the needle frames are fitted to slide up and down when moved by treadles, and in their up and down movements they are caused by means of cam apparatus at their end to move to and fro transversely. Thus according as the treadles are worked, the threads of the second and third warps are raised and lowered and moved laterly over or under each other and the threads of the first warp, so that all the warps are intertwined in various ways dependant on the order of the movements given to the treadles. When they are so intertwined, the weft thread is passed through the shed and stuck up by the batten. When a velvet pile is required, a loop warp is employed and wires being introduced, the loops are cut in the usual way. As the intertwined parts are firmly held, loops on both sides of the fabric can be cut, so as to present a velvet pile on both surfaces. The warps are of such material that the fabric on either or both sides may have the character of a rep, and it may have a rep surface on the one side, and a velvet pile on the other. The cam apparatus, which causes the needle frames to move transversely while they ascend and descend, consist in each case of a slotted lever, which is moved up and down by a stud on the needle frame, and which, by means of a pawl acting on a ratchet wheel turns a polygonal cam that bears against the end of the needle frame. The needle frame being pressed against this cam by a spring, is caused to move in the one direction as an angle of the polygonal cam bears against its end, and is caused by the spring to return when the cam turns so as to present its flat side to the frame. The inventor claims the manufacture of woven fabrics in which a warp passed through a reed and held stationary in the loom, is intertwined with one or two other warps passed through eyes of needles having combined vertical and lateral movements; the combination of a fixed reed for the stationary warp with one set or with two sets of moveable needle frames for the intertwining warp or warps; and in combination with a moveable needle frame, a pawl lever, ratchet wheel and polygonal cam, so arranged that the ascent of the needle frame causes a lateral movement to be imparted to it by the partial rotation of the cam, as above described.

Book Notice.

TEXTILE MANUFACTURERS' DIRECTORY OF THE UNITED STATES.
Published at 320, Broadway, New York.

This new directory, which has just been issued, contains a list of the manufacturers of woollen, worsted, cotton, silk, jute, flax, and other textile fabrics in the United States, and also gives the addresses of dealers and brokers in raw materials, dry goods, commission merchants and agents of manufacturing companies, dyers, &c. It ought to be in the hands of all who are interested in the textile trades of the United States. To machinists and others who do an export trade, it will prove especially valuable, and to manufacturers, who do a trade with agents and merchants, it will be a great acquisition. The work contains nearly 600 pages, and is published at 12s. 6d. per copy. We shall be pleased to forward copies to any address in the United Kingdom, on receipt of P. O. Order, made payable to H. and R. T. Lord, Halifax.

An improved starch for stiffening and giving a superior gloss to washed articles without injuring their texture has been patented by Mr. Julius Gunther, of Quincy, Ill. This starch consists in the combination in certain proportions of common starch, crystallized sulphate of ammonia, and crystallized boracic acid, the whole forming a compound which not only presents the advantages above cited, but renders the objects on which it is used fire-proof.

ODDS AND ENDS.

In dressing silk goods with amber, Thummel, of Berlin, dissolves one pound of amber in two pounds of chloroform and applies this solution to the silk with a sponge or brush. The goods are next dried in a drying chamber and the chloroform recovered. They are then passed between rollers heated from within, which imparts to them a remarkable softness and elasticity.

* * * *

Extensive preparations are making to utilise the cactus in the manufacture of paper and textile fabrics. The Mexican Government has recently granted important concessions to two individuals who propose engaging in this new industry. The concessions consist in giving these persons the exclusive right to gather the cactus for ten years from government lands. The grant further provides that for each mill of the value of 150,000 dols. erected by the grantees, for the manufacture of paper from the cactus leaf, the government shall give a premium of 30,000 dols.

* * * *

It is rumoured that the post office authorities are preparing a scheme for the insurance of parcels, and that the premiums will be at the rate of ½d. per £2 10s. and under in value, 1d under £5, and ½d. additional for every £5 up to £100, which is likely to be the limit. As nine-tenths of the articles at present sent by parcels post are under the value of £5, the rate seems very reasonable, but no doubt as soon as parcels can be insured, articles of greater value will be entrusted to the post office for delivery, and then the parcels insurance branch will be a financial success. A conference is being held at Tunbridge Wells by the practical officers of the post office upon the working of the parcels post.

* * * *

The French merchants and manufacturers resident in London, have held a meeting to take into consideration a proposal for the establishment of a chamber of commerce which shall specially watch over the trade between England and France, and afford to those who may join the association facilities for obtaining information on questions of commercial law and statistics. The work has hitherto been partially done by some members of the Société Nationale Francaise, a non-political club that has its home in Adelphi Terrace; but it is felt that organisation is required, and that the ever-growing magnitude of the interests involved demands that French commerce shall have a head-quarters of its own in London.

* * * *

At the recent Olympian exhibition at Athens, the Greek capital, there was shown coming from one of the agricultural countries of Greece, a fibre resembling silk in a manner so striking that it was believed to be silk by all superficial beholders. In reality it was nothing but the silky down which envelopes the seed capsules of the "Asclepias Syriac," a shrub introduced from South America into Syria and Southern Europe, notably in Greece. It is called the Syrian silk plant. Thus far it has mostly been used for stuffing pillows and compresses for surgical purposes; but mixed with wool it is now employed in weaving creditable tissues. It is the impression of those who studied the subject that it may in future be so cultivated and prepared as to obtain industrial and commercial importance.

THE GAZETTE.

Liquidations by Arrangement or Composition.

Chadwick C., and J. Shuttleworth, Heywood, Lancashire, cotton manufacturers.
Holden G., 12, Chester Road, Akroydon, Halifax, Yorkshire, silk spinner.
Swainson W. P., and R. Smith, 4, Huggin Lane, London, fringe manufacturers.
Sowry W. W., 17, Park Place, Leeds, Yorkshire, woollen cloth merchant.
Hammond T., Hollin Lane Dyeworks, Sutton, Cheshire, silk dyer.
Crowther Ann, S. Stables, and H. Stables, Pudsey, Yorkshire, woollen manufacturers.
Diehl T., Crescent Buildings, 27, Jewin Crescent, manufacturers' agent, &c.
Wilshaw G., London Road, Sutton, Cheshire, silk manufacturer.
Thornton, J., E. Thornton, and V. Thornton, Milnshaw Hill, Accrington, Lancashire, power loom cloth manufacturers.

Dividends.

Fleming J., Leadenhall Street, East Indian merchant; a third and final dividend of ½d. in the pound, at the office of Messrs. Harding, Whinney, and Co., 8, Old Jewry, London.
Kitching W., and F. Kirby, Northumberland Street, Huddersfield, Yorks., woollen and stuff merchants; a first and final dividend of 1s. 4¾d. in the pound, at the offices of Mr. W. H. Armitage, trustee, 23, John William Street, Huddersfield, Yorkshire.
Jackson J. M., Betta Jackson, Ann Jackson, Sarah Jackson, Ellen Whittaker, T. Jackson, R. Jackson, W. E. Jackson, and J. Cooper, Lyon Weaving Shed, Werneth, Oldham, Lancashire, velveteen manufacturers; a first and final dividend of 12s. 9d in the pound, at the offices of Mr. J. West, trustee, 16, Ashworth Street, Oldham.
Stephenson J., Victoria Dye Works, Dewsbury; a second and final dividend of 1d. in the pound, at the office of Mr. W. Whiteley, trustee, Market Place Dewsbury.

Dissolutions of Partnership.

Mellodew J., T. Mellodew, and J. Lees, Moorside, Oldham, Lancashire, cotton spinners.
Rayner J., and A. Helliwell, Water Royd Mills, Huddersfield, Yorkshire, spinners.
Walker N., J. Hartley, and J. Mitchell, Albion Mills, Morley, near Leeds, woollen manufacturers.
Buck R. R., E. R. Buck, and J. P. Buck, Low Green Mill, Dalston, near Carlisle, Cumberland, spinners.
Stead J. W. B., B. Tordoff, and E. W. Tordoff, 2, Bishopton Lane, Stockton-on-Tees, stuff merchants.
Adams John, R. M. Adams, and Joseph Adams, Nottingham, lace manufacturers.
Sanderson D., and J. E. Brierley, 14, Brown Street, Manchester, grey cloth agents.
Simon G., M. J. Simon, and I. Bernhard, Bradford, Yorkshire, stuff and woollen merchants.
Stavenhagen M. J., and F. R. Köhler, 8, Mill Street, Bradford, Yorkshire, wool merchants.
Ward M., and W. Ward, Ing Mills, Batley Carr, Battley, Yorkshire, woollen manufacturers.
Bell W., and C. S. Williamson, Bradford, Yorkshire, stuff merchants.
Campbell J., and D. A. Miller, 17, Mosley Street, Manchester, linen manufacturers and agents.
Turner P. P., J. Triggs, and R. Stagg, 58, Friday Street, London, carpet warehousemen.
Lumb T., and W. Lumb, Rochdale, Lancashire, cotton spinners.
Clyma F. W. G, and T. W. Chant, 512, Holloway Road, Middlesex, hosiers.
Clarke B. C., and A. W. Woodliffe, 56, Radford Road, Hyson Green, Nottingham, drapers and Trimming warehousemen.
Hilton S., and W. Grimshaw, Bury Ground, Bury, Lancashire, felt hat manufacturers.
Morris H., and W. Spray, Nottingham, lace manufacturers.
Wilkinson S., and E. Airey, Brighouse, Yorkshire, silk spinners.

Bills of Sale

	£	s.	d.
Ackroyd A., Smalewell, Pudsey, waste dealer, &c.	50	0	0
Bradley J., 11, John Street, Middleton, hat trimming manufacturer	75	0	0
Hallam J. N., King William Street, hat and cap manufacturer	175	0	0
Sykes J., Upper Low Westwood, Golcar woollen manufacturer	1,500	0	0 ab.s.
Marshall H., 30, Bagby Road, Leeds, woollen warehouseman	112	11	8
Hepworth W., Hanging Heaton, near Dewsbury, and T. W. Westerman, Talbot Street, Batley, waste openers	950	0	0
Bather J., jun., No. 5 Court, New Buildings, Coventry, silk dyer	128	3	6

PATENTS.

Applications for Letters Patent.

Belts or bands for machinery. B. A. Barczinsky, Regent's Park. A communication	4th Oct.	4717
Bleaching cotton and fabrics, G. B. Sharples, Walmersley, near Bury	5th Oct.	4738
Bleaching cotton, jute, &c. J. Woodcock, Huddersfield, and H. Webster, Dewsbury	29th Oct.	5119
Bleaching, dyeing, sizing, &c., yarns. P. T. and J. Zweifel, Manchester	9th Oct.	4792
Bleaching fabrics. J. H. Johnson, London	30th Oct.	5160
Calico printing. J. Millar and T. McKillop, Glasgow	9th Oct.	4785
Cleaning and preparing cotton. J. Elce, Manchester	10th Oct.	4828
Combing machines, C. Hoyle and I. and J. Ickringill, Keighley	9th Oct.	4777
Cutting machines for fabrics. L. A. Groth, London. A communication	12th Oct.	4862
Combing machines. H. Priestman and F. K. Adcock, Bradford	30th Oct.	5146
Chaining or linking warps. W. Hurst, Rochdale	24th Oct.	5059
Colours for dyeing. F. Wirth, Frankfort-on-the-Main. A communication	29th Oct.	5120
Dyeing fabrics. J. C. Mewburn, London. A communication	19th Oct.	4982
Dyeing and bleaching fibres. F. C. Glaser, Berlin. A communication	26th Oct.	5090
Dyeing yarn. W. R. Lake, London	1st Nov.	5200
Embossing fabrics. W. R. Lake, London. A communication	6th Oct.	4765
Fabrics for lining clothing. S. Hinrichsen and S. Whitlow, Manchester	18th Oct.	4969
Lace machines. T. Butler, Nottingham	16th Oct.	4923
Looms. W. W. Melville, Beith	20th Oct.	4992
Looms. J. S. Hargreaves, Ashton-under-Lyne	30th Oct.	5172
Looms. J. Richardson and J. Robinson, Farnworth, near Bolton	10th Oct.	4814

Looms. A. G. Bateman, Manchester 15th Oct. 4900
Pressing and finishing fabrics. W. and J. H. Beecroft, Leeds 5th Oct. 4744
Rendering fabrics impermeable. F. Wirth, Frankfort-on-the-Main. A communication 16th Oct. 4921
Reeds for looms. C. A. Burghardt, Manchester 20th Oct. 5003
Ring spinning and doubling frames. J. M. Hetherington, Manchester 2nd Oct. 4680
Sewing machines. J. McDevitt, Belfast 3rd Oct. 4700
Sewing machines. H. Gamwell, Liverpool 3rd Oct. 4711
Sewing machines. F. C. Glaser, Berlin 8th Oct. 4775
Sewing machines. J. McHardy, Dollar, N.B. 10th Oct. 4819
Sewing machines with rotary hook. C. Pieper, Berlin. A communication 4th Oct. 4712
Sizing machines. W. Brigg and R. Taylor, Darwen 13th Oct. 4890
Spinning and doubling textiles. W. J. Kinder, Harpurhey 13th Oct. 4891
Spinning fibres. W. R. Lake, London. A communication 16th Oct. 4922
Spinning, roving, and winding machines. W. Tatham, Rochdale 17th Oct. 4935
Sewing machines. W. F. Thomas, London 29th Oct. 5131
Ticketing bobbins. E. Weild, Manchester 13th Oct. 4884
Treating cotton fibres. P. M. Justice, London. A communition 15th Oct. 4901
Twisting yarns or threads. W. Cunningham, Dundee 23rd Oct. 5026
Twist lace. W. Birks, Nottingham 1st Nov. 5190
Vegetable wools. J. F. Phillips, London. A communication 23rd Oct. 5030
Washing machines. J. Donald, Glasgow 6th Oct. 4753
Weaving fabrics of irregular widths, &c. J. Lee, Rochdale 4th Oct. 4717

Grants of Provisional Protection for Six Months.

4164	4173	4174	4199	4202	4204	4228	4230
4231	4257	4262	4266	4277	4278	4301	4306
4323	4328	4333	4335	4353	4355	4360	4363
4364	4370	4390	4405	4406	3522	4141	4428
4433	4464	4487	4492	4891	4184	4581	4583
4590	4098	4614	4621	4636	4650	4652	4680
4700	4711	4712	4718	4738	4744	4761	4765
4777	4785						

Notices to Proceed.

Boxes or cases. H. J. Herbert, Richmond 15th Aug. 3965
Combing machines (Noble's). H. Priestman, Bradford 3871
Covers or cases for goods. J. Hertz, London 30th May 2695
Combing machines. J. H. Whitehead, Leeds 30th June 3248
Combing machines. W. Dobson, Douglas 11th Sept. 4353
Dyeing matters. A. P. Price. London. A communication 15th Sept. 4428
Dyeing fabrics. H. H. Lake, London. A communication 11th June 2906
Felt carpets. W. Mitchell, Waterfoot 23rd Aug. 4081
Felting wool for hat bodies. C. Vero and J. Everitt, Atherstone, Warwick 22nd Aug. 4072
Lace machines. A. C. Henderson, London. A communication 28th June 3208
Looms. W. Smith, Heywood, and J. Wrigley, Bury 27th June 3194
Looms. C. D. Abel, London. A communication 10th Sept. 4328
Looms. W. H. Tristram and H. Brereton, Halliwell, Bolton 21st June 3075
Looms. R. Brownbridge and P. Bond, Macclesfield 12th Sept. 4364
Looms. J. and A. Wallwork, Hurst, Ashton-under-Lyne 6th June 2806
Looms. W. Irving and F. Howarth, Liversedge, Yorks. 8th June 2860
Looms. R. S. and R. Collinge, Oldham 13th June 2935
Looms. W. H. Kenyon, Denby Dale 14th June 2960
Machine for measuring and marking cloth. J. Farmer, Salford 24th Aug. 4102
Packing frillings, fringes, &c. J. McCallum, Manchester 26th Sept. 4580
Ring spinning frames. W. T. Emmott, Salford 29th May 2658
Refining jute, &c. E. T. Hughes, London. A communication 22nd June 3103
Reeling yarns. B. A. Dobson, J. Hill, and J. A. Waite, Bolton 29th Sept. 4650
Spinning fibres. W. J. Kinder, Harpurhey 13th Oct. 4891
Stop-motion for drawing frames. J, Macqueen, Bury 23rd June 3118
Saddle cloths. H. H. Lake, London 25th June 3145
Sewing machines. H. Grellier, Brixton 28th Aug. 4158
Spinning spindles and their bearings. A. M. Clarke, Chancery Lane 6th June 2823
Spinning machines for cotton, &c. J. T. Chadwick, Salford, and J. Crossley, Bury 5th Sept. 4266
Spinning machines. F. Heslop, Leeds 13th June 2942
Stretching woven fabrics. J. Strang, Ramsbottom 29th May 2652
Treating cotton and woollen rags. J. Illingworth, Batley 5th June 2796
Wool-washing machines H. J. Haddan, Kensington. A communication 15th June 2983
Wool-washing machines. J. and P. Hawthorn and J. P. Liddell, Newtown 16th June 2999
Yarns to imitate furs of animals. W. R. Lake, London. A communication 26th June 3172
Winding machines for yarn, &c. W. Clarke, London. A communication 3rd Aug. 3808

Patents Sealed.

1768	2181	2237	3038	3643	1999	1904	1905
1947	1958	2135	2232	2296	3822	1946	1963
1976	1989	2004	2173	2059	2151	2736	3787
2098	2168	2672	2150	2317	2432	2225	2233
2240	2251	2541	4145	2254	2468	4006	

Patents on which the Stamp Duty of £50 has been paid.

Sewing Machines. H. J. Haddon, London 5th Oct., 1880 4036
Carpets. T. B Worth, Stourport 15th Oct., 1880 4206
Colours on cotton and other fabrics. T. Holliday, Huddersfield 28th Oct., 1880 4400
Finishing stuff goods. J., and J. W., and J. Reffitt, Leeds 15th Oct., 1880 4202
Looms. W. Thompson, Rawdon, Leeds 16th Oct., 1880 4224
Looms. T. Reeder, Preston 20th Oct., 1880 4277
Temples. J. Parkinson, Bradford 22nd Oct., 1880 4312
Stop-motion doubling frames. J. Brigg, Wakefield 21st Oct., 4286

Patents on which the Stamp Duty of £100 has been paid

Cutting rags, &c. J. R. Robinson, Dover 6th Oct., 1876 3873
Lace machines. E. Simon, Paris. A communication 23rd Oct., 1876 4101
Waterproof fabrics. T. Foster, Streatham 10th Oct., 1876 3921
Comb for combing wools, &c. T. W. Harding, Leeds 17th Oct., 1876 4011
Lace machines. A. Mosley, Nottingham 18th Oct., 1876 4030
Pickers for looms. A. S. Wild, Wardle, and G. Chadwick, Bury 19th Oct., 1876 4039

Copyright of Designs.

(Registered during September, 1883.)

Class VI., Carpets.

404,569-79 Storey Brothers and Co , Lancaster.
404,587 J. E. Barton, Kidderminster.
404,608-609 The Heckmondwike Manufacturing Co., Yorkshire.
404,659-64 H. R. Willis and Co., Kidderminster.
404,822 J. and A. D. Grimond, Dundee.
404,871 Thomas Briggs, Manchester.
405,216-22 T. B. Worth, Southport.
405,299 Storey Brothers and Co., Lancaster.
405,337 Fairfax, Kelly and Sons, Heckmondwike.
405,469-71 T. B. Worth, Stourport.
405,472 H. Fawcett and Co., Kidderminster.
405,638 J. Humphreys and Sons, Kidderminster.
405,719 C. Harrison, Stourport.
405,766 Storey Brothers and Co., Lancaster.
405,950 Stoddard and Co., Eldersley, N.B.
405,952 The Heckmondwike Manufacturing Co., Yorkshire.

Class XI., Furnitures.

404,559-60 Melland and Coward, Manchester.
404,561-63 R. Dalglish, Falconer and Co., Manchester and Glasgow.
404,610-11 T. Wardle, Leek.
404,639-42 S. and C. Nördlinger, Manchester.
404,665-66 S. and C. Nördlinger, Manchester.
404,807 The Rosendale Printing Co., Manchester.
404,928-31 Thomson and Robertson, Glasgow and Manchester.
405,368-69 R. Dalglish, Falconer, and Co , Manchester and Glasgow.
405,374 Barlow and Jones, Limited, Manchester.
405,473-75 The Rosendale Printing Co., Manchester.
405,489-90 T. Hoyle and Sons, Limited, Manchester.
405,531 Cowlishaw, Nicol and Co., Manchester.
406,633-34 Morris and Co., London.
405,730 The Rosendale Printing Co., Manchester.
405,828 E. Potter and Co., Manchester.
405,829-31 J. Murray and Co., Glasgow.
405,953-54 R. Dalglish, Falconer and Co., Manchester and Glasgow.
405,975 Melland and Coward, Manchester.
406,042 R. Dalglish, Falconer and Co., Manchester and Glasgow.
406,090-91 The Rosendale Printing Co., Manchester.

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Contents.

Notices.

The Half-Yearly Subscription—payable in advance—including home postage, is 3s. 6d., Cheques and Post Office-Orders to be made payable to H. & R. T. LORD, 3, Gerrard Street Halifax.

The Publishers will be happy to receive intimations of New Inventions, Patents, &c.

The Publishers are open to receive from Designers, Original Designs of Carpets, Damasks, Tapestries, Linen, Cretonnes, &c., and such as are accepted will be published with the Designers name affixed. All Designs sent for approval must be 10 inches long by 7 inches wide for single page, and for double page, 16 inches by 10 inches, and must be accompanied by Postage Stamps sufficient to pay return Postage in case they are rejected.

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Authors are requested to retain copies of their manuscripts; rejected manuscripts cannot be returned.

To prevent any misunderstanding, all Articles sent to the *Journal of Fabrics and Textile Industries* for publication will be considered as offered *gratuitously*, unless it be stated explicitly that remuneration is expected.

Readers are invited to forward items of interest to the Trades concerned.

The Proprietors will feel greatly obliged if any of their readers, in making enquiries of, or opening accounts with, Advertisers in this paper, will kindly mention the *Journal of Fabrics and Textile Industries* as the source from whence they obtained their information

The Rivers Pollution Act.

How it is Affecting Manufacturers of Fabrics.

THE manufacturers of cotton and other goods in the textile districts have been greatly affected by the passing of "The Rivers Pollution Act," which has, especially in populous neighbourhoods, rendered it extremely difficult to erect new works, for the finishing of fabrics, in parts where water is tolerably free from impurities. A Lancashire paper ventilates the question as affecting the cotton industries, in language which is applicable to the textile industries at large, not only in the finishing, but in many other branches. The effect of this Act has been to keep almost stationary the number of concerns which carry on bleaching, dyeing, and other finishing processes, whilst the cotton trade is extending year by year, and more particularly in connection with the demand for white, dyed, and other cotton fabrics. The result is a clear monoply, just as effective as if it had been brought about by a high protective tariff. On the one hand, we have manufacturers complaining year by year of serious losses, whilst the very next process to which the grey goods are subjected after passing from them, viz., bleaching, is in the hands of a combination, whereby the price for the work is fixed without reference to competition, and we may say practically without reference to cost. In the finishing trade we could point out cases where goods which cost 1s. to finish twenty-five years ago, are now charged 20d., even though the work is performed for less, and all the ingredients used in the process are now cheaper. So greatly is this monoply beginning to afflict the trade that some bleachers are able to refuse work, and thus limit the number of their customers. Others are so crowded out with work that they find it impossible to serve their clients in any reasonable time, and thus put merchants with small capital to very great inconvenience by all manner of vexatious delays. One well-known firm is literally besieged with work, for which they charge 6d. per piece, although a reasonable profit could be made if 4d. only was demanded. They have constantly scores of thousands of pieces "waiting their turn," as it is called. When we hear so much about foreign competition and the necessity of cheapening more and more the cost of our goods in order to extend the area of consumption for them, we think it highly advisable to search out some means of checking every remnant of monopoly which has grown up on the lines of our trade. The finishers themselves may well pause in any attempts to interfere with the proper level of prices for their work, as would be evidenced by free and open competition. Goods for the North of Europe, which at one time were exported ready for the consumer, are now being sent grey, and the process which they would, under fair conditions of trade, have undergone in this country are more cheaply carried out there. It is invariably true that monoplies have a tendency to defeat their own ends. There is a very large and growing demand for all the finer classes of finished fabrics produced in this country. The tariffs of the world are having the effect of driving us from the production of coarse fabrics into the higher branches of manufacture, nearly all of which goods need to be passed through some one or more of the processes of bleaching, dyeing, printing, embossing, and finishing. We cannot afford to be cramped in the least in the expansion of our trade. If the waterways in Lancashire at present available for bleaching are insufficient or highly protected or monopolised, and thereby rendered useless for our growing necessities, then this will be one very great argument in favour of making the ship canal, whereby hundreds of finishing works may be erected to meet the expanding demand for finished fabrics."

An Exhibition at New Orleans in 1884-1885.

Particulars of the Exhibition at New Orleans, the great cotton centre, are now being issued. It is to commence in December, 1884, and to close in June, 1885. It is not confined to cotton products, but will include industries of all descriptions. The exposition opens the centennial year of the first exportation of cotton from America. Sub-commissions are to be established in every State, to make known through the States the rules concerning the organisation, and to distribute forms of application for admission, and all other documents relating to the exposition. The classification of the exhibits is as follows:—1—Agriculture; 2—Horticulture; 3—Raw and Manufactured Products, Ores, Minerals, Woods; 4—Furniture and accessories; 5—Textile Fabrics, Clothing and accessories; 6—The Industrial Arts; 7—Alimentary Products; 8—Education and Instruction; 9—Works of Art; 10—Pisciculture. Each of these groups will again be divided into classes. Goods from abroad will be admitted free of duty, except those intended for sale or consumption. A large amount of motive power will be furnished and a main shaft; all countershafts must be furnished by exhibitors. Machinery will be shown in motion. Exhibits once lodged must not be withdrawn until the close of the exhibition. Every proper precaution will be taken to protect the exhibits from injury, damage or loss, but the management do not assume responsibility for exhibits. All foreign applications must be in accordance with a special form furnished by the director-general to foreign commissions. Printed forms in accordance with the regulations will be furnished upon application to E. A. Burke, director-general, New Orleans, La, U.S. America.

The Irish Poplin Trade.

RECENTLY a suggestion has been made, says a trade contemporary, which, if brought prominently before the public, should go far towards improving one branch of the drapery trade that has been for some years in a desponding state. The suggestion simplified is this, that Irish poplin should supersede the richer kinds of wall paper now in use in the houses of the gentry and mansions of the wealthy. At first sight the proposition would appear a somewhat startling one. It would seem the height of folly and extravagance to employ a rich material like poplin for such a purpose; but if we carefully analyze the pros and cons we shall find that the idea has by no means sprung from a mere quixotic impulse to advance the interests of a languishing industry, but rather because a thoughtful man has discovered that poplin is especially adaptable for the purpose of panel decoration. Some years ago the present Duchess of Marlborough, when she inhabited Dublin Castle as the wife of the Lord Lieutenant of Ireland, was recommended to try poplin damask for one or two of the vice-regal reception rooms, both for "dividing curtains," and panelling purposes, with the result that the general aristocratic verdict pronounced the innovation excellent, and even to-day it is acknowledged on all hands, if we are to credit the statement in one of the leading Dublin papers, that these particular rooms present by far the best appearance of any suite of apartments the Castle boasts. Our readers will naturally ask why, under the circumstances, has not the practice become general if the first attempt turned out so successful. Our only answer to this very natural query is, that among the upper classes there is a general objection to, and avoidance of, detail in conversation. Lady B——would, for example, admire the rich colouring of the wall decoration, but she would be hardly likely to inquire of her grace what was the cost per yard, as people of the middle classes would do; while the Duchess, fully alive, as she proved herself, to the necessities of the Irish people, does not, so far as we know, appear to have pushed the poplin wall covering with her friends more than by giving her visitors a striking example of what an elegant substitute for ordinary paper it makes. The cold, hard, unsympathetic wall which is to be found in most modern English abodes has recently been the subject of an attack in a Society journal, which says "that the reason why at an ordinary dinner party the jargon of voices precludes the possibility of eating the meal in comfort, or listening to one's neighbour without placing one's ear close to the mouth of the speaker, is simply due to the wall of the ordinary English dining room, which is incapable of absorption, and throws back every sound until the clangour becomes absolutely intolerable." The substitution of poplin damask would alter all this. Apart from the lovely hues, to which no wall paper ever made could bear comparison, poplin has a softness to the eye and a general finish which the most excellent damask paper could never cope with. Far from radiating sound, it is an absorber just as much as velvet pile is. To make our meaning more plain to the reader, let him, if he be in a large warehouse or shop where velvet is stored in any quantity, speak in that department at a certain tone, and then let him adopt the same strength of voice and try his lungs in the Manchester department. He will find that the calico throws back the sound and the velvet deadens the tone. The same deadening effect precisely is produced by Irish poplin, and this alone to the upper classes, were it properly known, would constitute a strong argument in favour of its adoption in place of wall paper. Now, as to price, which, in spite of the long purses of the upper ten thousand is, after all, perhaps, one of the principal factors to be considered in dealing with this question. There are specimens of beautifully-designed papers to be seen in many West End windows at prices which would rejoice the hearts of most of our Irish poplin manufacturers. Indeed, we did hear the other day, though we cannot absolutely avouch the truth of the statement, that the wall paper of a bijou dining-room now being fitted up for a well-known gentleman, who has made a large fortune with his pen, cost more than all the furniture in the apartment. Taking it roughly, many of our high-priced papers touch close on a crown a yard, while the width of the richer sorts barely exceeds ordinary 23/24 silk width. Good dress poplin can be sold for six shillings with a very fair margin of profit, and should the public once take up the idea it would be comparatively easy to have special clothes made at a price which would induce the upper middle class to also fall in with the idea. Of course it would be idle to suppose that such a novelty would be taken up at once. It would not be until at least two London seasons had waxed and waned, that the full flush of a new permanent industry would begin to set the dusty unused looms of Belfast and Dublin once more on the whirr. There are large stocks to be used up; stocks which the inexorable decrees of fashion have long left rusting on the factors' hands. Then the orders would begin to pour in for dress lengths as well, since in turning out new and elegant shades for wall purposes, it stands to reason that the feminine eye would be attracted, and as matching dresses with carpet hues is not at all infrequent, it is extremely probable that the poplin wall shades would be matched in similiar material. This is, of course, assumptive, but it is based on strong probability. In the days when Irish poplin was in vogue, before Free Trade had taken off the duty on French silk poplin, the trade done with the sister isle was very considerable. Scarcely a farmer's wife but boasted her *real* poplin dress, and even now in old daguerreotypes one may see the unmistakeable poplin pattern figuring, showing that it was considered the *best* dress, for who in those days, ever thought of having their portraits taken in any other. Yet now the very appearance of an Irish poplin dress in a drawing room suggests old-fashioned ideas to those who know no better. We are therefore very pleased to note the fact that Her Majesty, whether spontaneously or by advice, is about to give an impetus to the industry once more. Only a few day ago, an eminent firm of Irish poplin makers were commissioned to send to Windsor several dress lengths of beautiful floral designs in electric blue and ruby, so that it is possible that at the next Court ceremonial we shall have to chronicle a rather important departure from the usual routine of satin, velvet, and silk.

The National Competition of Schools of Art, 1883.

The Designs for Textiles.

The official report of the examiners appointed to make the awards of prizes for works submitted for National Competition has been issued. Much dissatisfaction has been expressed at the awards that have been made in designs for textiles, and no doubt with much reason. We think with those who are dissatisfied, that it would be more satisfactory to the competitors and the committees of the various schools of art, if, in future, the authorities at South Kensington, appointed as examiners men who were not only versed in art, but those who understood thoroughly the practical working of the designs in the factory. It is one thing to judge designs from an artistic point of view, and another to judge them in a manufacturing sense, but by combining the two, no doubt a more satisfactory condition of things would result. At the annual meeting of the School of Art at Nottingham a few days ago, the secretary commented upon the competition as follows:—"I have to refer to the unsatisfactory manner in which designs for our local manufacture are rewarded at South Kensington. It is now four years since a gold medal has been awarded to a lace design from the Nottingham school, though they have been gained for painting, architecture, and other subjects. During the three years that I have been here no effort has been spared either on the part of the masters or the students to regain this distiction, but the prizes given by the Government examiners for this subject have each year become lower in value. This year the number of designs submitted was larger than it has been since 1879, and those members of the committee who were present when the Mayor's medal and other local prizes were awarded, before the designs were sent to South Kensington, desired me to acquaint the students with their gratification at the unusual excellence of the competition Notwithstanding this these works gained still lower awards even than usual in the national competition—the highest prize given to them being a bronze medal, while a silver medal was awarded to a very badly drawn and inferior design for a hand-made flounce from the Exeter school, which the examiners in their report call a 'machine lace curtain,' the report continuing 'hand-made laces were not so good as in previous years.' If the examiners have on the same principle been judging the designs for machine-made curtains sent from Nottingham as hand-made laces, the reason we no longer receive gold medals for them is readily found. But I would suggest that such a manner of viewing the designs is very discouraging to those students who are seriously in earnest about their work. Therefore I beg to ask the committee to consider what representations can be made to the authorities of the Science and Art Department, with a view of obtaining the nomination of an examiner who understands the technicalities of lace. This dissatisfaction exists in many other branches of the textile trades, and it is to be hoped that the move the Nottingham school has made, may induce the South Kensington authorities to make some alteration in the class of examiners in any department in which more practical men are required."

A New Blue Colour as a Substitute for Indigo.

A French chemist has recently produced a new blue colour as a substitute for indigo in the dyeing of cotton, wool, and silk, and the method of producing it has been patented in this country. For this purpose is effected a new conversion of the induline base in order to produce, with the addition of violet methylaniline and nitrosodimethylaniline sulpho-conjugated and other derived violets, as well as methylaniline, iodide of ethyl and rosaniline and even other blues derived from aniline, methyline, rosaniline, an indestructible blue giving as a result the shade obtained from indigo and its application in dyeing on the materials mentioned above.

The conversion of the induline base into an acetate a sulphate, or a chlorhydrate or a chlorate takes place by means of the direct action of either of the appropriate acids to form the compound, and the addition or combination of blue of nitrosodi-

methylaniline, or of aniline, or rosaniline, or a violet of methylaniline iodite of ethyl or rosaline. This mixture applied to the material to be dyed produces a grey blackish shade whieh is converted, by means of tannate of tin, into a green colouring matter fixed on the fibre, after which it is dyed with the new product. The manufacture of the blue is carried into effect as follows. In a bath of paraffine or oil is put the base of induline in contact with C^4 H^3 O^3 (Acetic acid) or H^2 S O^4 (Sulphuric acid) and heated until the mass forms a homogeneous paste, it is then washed and dried. The mass then presents large broken copper coloured crystals having the appearance of indigo. The product thus made is insoluble in water.

In order to apply it to the dyeing it is thus converted. In a litre of ethylic, or amylic, or methylic, or other alcohol is dissolved 120 grammes of the said base, it is dissolved as required after which is added nitrosodimethylaniline sulphoconjugated or the methlaniline violet indicated above. When this is done the product is liquid and fit for commerce After dyeing the product it is oxydised as required, for example by means of the action of 2 Cr O^3 K (Dichromate of Potash) in a bath for some time.

Designing—Advice to Beginners.

As in every other art or science, all preliminaries, in preparing any one for the duties of a designer or general manager of a manufacturing establishment, should have but one aim—to train and dicipline the mind, senses and abilities in the proper direction. The powers of concentration and continued application must be acquired by most men, and not a few find it a hopeless battle; yet without such powers some other business would probably answer better. The next important step is to become familiar with a large variety of fabrics already in existence. In pursuing this requisite study, the first suggestions are easily applied. The best method is to obtain samples from every available source, dissect them with care, and use each sample as a base of operations until all the particulars are obtained. First, by studying out as many as possible; next, by inquiring for the balance. This method will aid the student in asking direct questions, a feature in questioning which is a great help to one who asks and the one who is to answer. Nothing is more discouraging to a tutor than many questions which show a lack of thought on the part of the questioner. Few men can refrain from answering questions which show deep and intent thought, and few care to be bothered with anything trivial. A little further digression will be pardonable here. Young people often flatter themselves with the idea that they are thinking, when in reality they are only dreaming. The dlfference is so great that the one almost always bears fruit, the other seldom. To obtain samples is a matter so easy that they can at times be collected much faster than properly dissected and studied. Such surplus is not worthless because plenty. Discard worthless samples from the first, and preserve good ones with care. As each sample is dissected let it be neatly trimmed and fastened in a durable book, all the drafts recorded in another, and all the general information in regard thereto, which has been gleaned from any and every source, briefly and correctly recorded in a third, care being taken to keep up a system of numbers and page references which will make search for particulars of any pattern easy. If any beginner would realise the importance of this suggestion, let him imagine if he can, what he would give for such a collection of books compiled by some man of large experience. These suggestions are written with the supposition that no one will venture to begin designing without some adequate knowledge of looms. Should this for any reason have been neglected or postponed, it must be delayed no longer after the decision is fully concluded to continue the study. Good instruments are not only a great aid, but much cheer to a beginner; better have a few pieces only, and have such as will warrant a commendable pride. Having good instruments, the next point is to learn their use and application thoroughly. Some have the impression that once in the possession of the proper instruments all will be easy, but, like everything else, designers' instruments require much practice before their advantages can be known or shown. Furthermore, designing being a calling which demands cultivation of good taste, this cultivation should show itself in everything; the person, books, instruments, and surroundings. From the earliest beginning the habit of keeping close vigil over all processes by constant examination of goods ready for market is an advantage that should never be missed if available. So complete is the general supervision, that managers have been known to direct the operations of the factory almost entirely from this point of observation with tolerable success. Far the most common fault in manner and method of beginners is the impatience they exhibit in everything; especially is this true in younger persons. The necessary time to do anything methodically is seldom taken, but the worst phase of this fault is that which shows itself when anyone imagines that rapid work is sure evidence of familiarity with, and special ability for, the work in hand. Such people have more or less deceit in them to commence with, they would appear smarter than their own consciousness allows. The result of such labour is almost invariably faulty, and the whole principle of the method or habit is demoralising in every sense of the word. Particularly in designing, or any kindred work, is the old saying applicable, "Anything that is worth doing is worth doing well." Few things in the designing room can be done well without the most thorough preparation. The outside duties, if any, which compel a designer to slight his work are an injury to him and his employers, hence we contend that manufacturers do not save so much as they imagine when they make one man hold several positions. The wages of one man for a year is sometimes lost by one neglect, one hurried piece of work, one error. Such losses are attributed to other causes, even by the one who knows better, for fear of consequences; thus manufacturers go on losing money faster than they can save it, at the same time making liars out of young men per force. To the beginner we would give this advice: Take your time, do your work right, never mind what people say or think, lose twenty positions because too slow, rather than one for errors of bad work, and rather than be one of the many who falsely deny a fault, failing, error or inability, stay in the humblest position; there is more honour and satisfaction in it! Large salaries, easy positions, and great reputations, afford no comfort to him who holds his position by trick or deceit. And to employers we would say, treat the young men accordingly, so that they can be upright.—*Spitzli's Manuel.*

Lecture on Commercial Law.—Liens and Agents.

The second of the series of lectures on commercial law was delivered in Manchester, on the 27th ult., by Mr. T. F. Byrne, who, having in the first place dealt with the subject of warranties, next spoke of liens, which he said were particular and general. The lien in particular was where there was a claim to retain the goods in respect of which the debt arose. This existed on all goods on which the person claiming the lien had bestowed labour or time for which he had not been paid. General liens were claimed in respect of a general balance on account, and existed only by virtue of agreement, or custom, or previous dealings of the parties. At common law a lien did not extend to cases where expense had been bestowed on the object claimed to be retained without producing any alteration in it, but by special agreement where the intent of the parties to create a lien in other cases was plain it would have effect, or by usage of trade a lien might be incorporated into contracts in cases not within common law. A lien was lost when possession was abandoned, when security at a future time was taken for the debt, or when the parties came to a new agreement for payment in any particular manner. Stoppage in transitu was another remedy of the unpaid seller, and the effect of it was not to put an end to the contract, but to give the seller a lien on the goods. Coming to the subject of agency, anyone, who might contract on his own behalf, might appoint an agent to contract for him; but anyone, who was already an agent, could not, as a rule, without authority to do so, employ a sub-agent to carry out the subject matter of his agency. An agent might be a person who could not contract on his own behalf. For instance, an infant, with some exceptions, could not bind himself by contract, but he could as agent contract so as to bind his principal. Except when the agent was authorized to contract by deed or under provisions contained in the Statute of Frauds, no particular form was need for his appointment. Such appointment might be made in words, written or spoken, or it might be inferred from the acts of the parties, their relationship, or the course of dealing betweem them. In certain exceptional cases authority to contract for another, whose interest was concerned, was implied by law from the necessity of the occasion, as the authority of the master of a ship to pledge the owner's credit for purposes incidental to the due prosecution of the voyage. If a person contracted professedly on behalf of a principal from whom, in fact, he had no authority, such contract did not bind the principal, unless he chose to ratify it, to adopt and to make it his own. There were agents particular and general. The particular agent was one who was authorized, only, to do some particular act, or make some special contract, and if he exceeded his limited authority his principal was not bound. The general agent was one employed to do all things incidental to a certain kind of employment, or which usually fell within the scope of the employment in which he was engaged. Such an agent was taken, no matter what his instructions were, to have authority to do all things usually done by persons filling such a position as he had been placed in by his principal. Explaining the liability of principals and agents, Mr. Byrne remarked that misrepresentation and fraud committed by agents acting in the course of their business for their principals had the same effect on agreements made by them as if the misrepresentation and fraud had been made, or committed, by the principals. But if such frauds were committed by agents in matters which did not fall within their authority, the principals were not affected.

Technical Education as applied to the Fancy Woollen Trade.

At the opening of the Galashiels Weaving School, a few days ago, Mr. Beaumont of the Yorkshire College, gave a lecture on "Technical Education," part of which will be of interest to our readers. After speaking of the material, &c., of which clothes were made in former times, and of the rapid strides that had been made in England and Scotland in manufacturing, he said, "He doubted if any other industry had made further advancement within the last thirty years. Thus some might say they had no need of technical education, because they had done wonders in the past without it, and without local Government or corporate aid, but solely by their own industry, thoughtfulness, perseverance and skill. They had indeed produced a fabric worn now alike by the plebeian in the cot and the prince on the throne There was no class but what patronised the tweed trade. All the professions, the medical and the theological included, wore their goods. They could not now think of a summer tour without being rigged out in a suit of fancy woollen goods, and, to some extent, they made them do professional duty. They should not, however, sit still and be quiet. They were not to do as Mr. Goschen, in his speech at Edinburgh, recommended. He took for a motto, a French saying which, being interpreted, meant—'Let it alone.' They could say that if their neighbours across the Channel would be quiet, but they wont. As a rule, they had a good atmosphere in this country for manufacturing. They had excellent water and cheap coal, and a capital reputation. They had also good mills and an industrious population. One might think with all these advantages they might be satisfied with what they had attained to, that they would sit easy and and comfortable in their chairs, and not be driven into technical education. It had not merely now been brought forward by their competitors. It had been worked by them for a considerable time. If he was to enumerate the whole of the technical schools he had visited they would be astonished. They believed that their men in the same circumstances as foreigners would do as much and sometimes more. But they could not work impossibilities, and they were at a disadvantage without technical education. One maker told him he had exported 4000 looms. One had sent away even more to a place in the neighbourhood of Morany. The foreigner has a hold of this machinery, and it tells against us, he having been working schools for the last thirty years. If he was informed correctly, the Germans began technical schools after the exhibition of 1851, and the manufacturing of woollen goods settled itself down there. We were late in commencing this kind of work, never seeing the benefit of it till lately. On the continent they had seen it for a considerable time, and were now our competitors in nearly every market in the world. They could let the subject alone if manufacturers in Rouen and elsewhere in France would let their technical schools alone. They had these superior to us, and we could not stand as third or fourth rate manufacturers. A gentlemen from Verviers in Belgium, a manufacturer of yarns, who comes here to sell them, called on him lately, whose father's mill he had seen through They have had a technical school for twenty five years, and were going to erect a new one with all classes of machinery for making all kinds of woollen goods. This shows that they are determined to give their artizans full education for the position they have to occupy In Saxony, Alsace, and many other places on the Continent, they have efficient schools, some with forty hand-looms, and some with power-looms, all well fitted up Thus they were working to purpose and advantage. What did they mean by technical education in connection with the fancy woollen trades? What he meant, based on his experienced of the school at Leeds, was to fit the workman thoroughly to do his work. He had a student who called himself a young man, but who was 44 years of age. He did not object to aged students, for that man was a good student, very teachable, doing all he was bid, and ready for more if required. But they wished specially to qualify the young man of 23 or 24 to take a first-class position in a mill here, or in any other country. They wished to give him the experience it had taken them 40 or 45 years to acquire, to make use of it so as to conduct his work to the best possible advantage. There was a great deal to be said on this point. General principles could be imparted in technical schools which would apply to every mill in the world, even though manufacturers might have different ways of working. There were some important things which should be taught. They should commence with the beginning of all textile manufacture—the wool trade. If they made a bad selection of wool, they could never right it. A bad selection of the raw material would tell on the stuff sold even to the merchant's warehouse. They should select the wool to what they intended to do, not Buenos Ayres wool to make a broad cloth or such ways of doing. A manufacturer who has got a knowledge of the properties of the wool could select what would be most advantageous to his business, Then there was dyeing. He had often said the colour was the first thing the merchant looks at. He sees it ere he looks at the design or texture of the cloth. Hence the importance of a good and fashionable colour. He had observed that the colour sold the goods. They might have good wool, excellent design and well made cloth, but if the colour was bad the cloth would go at a sacrifice. A slight defect in make, &c, might be looked over, but not bad colouring. He would carry technical teaching to scribbling and spinning, and combing, up to the time the yarn was ready for the warp. He would give instruction to the young man up to the yarn, and then begin with designing. And what a field was there! Look at the variety of goods being produced now. There was a large variety of patterns for mantle cloths, ladies' jackets, &c., and when they looked at the enormous quantity of designs for fabrics for the male sex the field got even wider. They were now producing the largest variety of patterns since the trade began, and the subjects were not exhausted. Look at the different kinds of cloth; there were single cloths, combinations of single cloths, double cloths, and combinations of doubles. He noticed the French way of dividing these, and quoted a French writer who said the life of man, if he lived to 70, was too short to comprehend and utilise what could be done in the designing art. Yet there was more to be done. He would include milling and finishing. That perhaps would not be taken up at first in Galashiels, but they were not to stop at what they began, but go into subjects foreign to the locality and increase the knowledge of the student to the utmost extent."

New Cloth Patterns for Winter Goods for 1884.

THE new cloth patterns now being produced for the winter season in 1884, are rather fewer in number than has been the case during the past few weeks, as manufacturers are preparing for the spring season of the year 1885, still some excellent samples of different classes of cloths are being put upon the market, which vary in a slight degree, from the patterns we have issued in recent numbers of *The Journal*. Some of these we give examples of in the present issue; they include designs of heavy worsteds with woollen backings, suitable either for under or over-coatings, they are neat and very effective patterns in the cloth, and if well woven and highly finished, are sure to meet with the approbation of the public. There are also some designs of worsted trouserings, having an admixture of silk in their composition, the full particulars of warp and weft being given, which will admit of considerable variation of colouring being introduced; these have been woven in two sets of colourings, and have proved of special excellence. In addition are given some good examples of tweeds, &c., which ought to prove of great advantage to manufacturers and designers. A design is given in which a new feature has lately been introduced, it is that of a fancy woollen cloth adapted for suitings, in which *tinsel* has been introduced in an effective manner, in such proportion as to make its appearance not too prominent in the material. These patterns, if properly worked out (and this is an easy matter for designers, as particulars are given in as concise a manner as possible) should prove a decided acquisition to the manufacturer. We have a selection of new patterns now before us, amongst which are some cloths which promise to be popular next winter, and bear the name of velvet pile. The samples are mostly in grey shades—some plain and others figured goods—and as the name indicates the cloth is of a very soft and velvety nature (which is imparted to it in the finishing process) while it is at the same time of the toughest description, and will undoubtedly prove a first class wearing material. Altogether, it is perhaps the most novel specimen of next winter's goods, and we should recommend manufacturers to turn their attention to it immediately. In the shades of colourings now being attempted, are some in blues, browns, yellows, reds, &c., which are being arranged effectively. These shades a few years ago would have been thought rather outrageous, but now they are meeting with success, and the demand seems to be for more striking combinations still. Amongst the cloths which will undoubtedly be the fashion in the latter part of 1884 and the beginning of 1885, are some good examples of checks, stripes, and mixtures, the greater portion being the first named. These in the cloth are from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch square, and in colourings greatly varied, it being impossible to describe the combinations properly in writing. A few of them have dotted effects, examples of which we have given recently, and which are likely to run through many of the patterns for 1885. In stripes, the specimens are, if anything, more striking than the checks, especially in the variations of colourings, many of these are so woven, that a close view shows them to be a faint check, but at two or three yards distant a distinct stripe. In the mixtures the selection is not striking, as the fashion in these goods is only of a secondary character. The patterns are worsted, woollens, &c, and the tendency is to finish them highly, even in the lower qualities of goods, which recently had a harsh and unyielding feeling about them. Rapid strides have been made in the finishing departments, so that both in appearance and in actual wear and tear they are considerably ahead of two or three years ago.

Heavy Sizing in the Cotton Trade.

The visit of the Marquis of Hartington to North-east Lancashire in January last was made the occasion of laying before him representations as to the injurious effect of heavy sizing and steaming upon the health of the operatives. The outcome of that interview was the appointment at the beginning of April of a Commission including Mr. E. H. Osborne, Her Majesty's Inspector of Factories, and Dr. Bridges, Medical Inspector to the Local Government Board. A contemporary says, both at the time of the interview alluded to and on the appointment of the Commission named we took the apportunity of expressing decided opinions as to the impolicy of any further legislative interference with the cotton trade save on the grounds of the direst necessity. We think the following clauses extracted from the report are clear evidence that the picture of the evils resulting to health from such practices has been much overdrawn. As the Commissioners passed through the mills they selected 27 persons who were operatives, 'of whom 17 made no complaint. Many of them had worked for many years as weavers in sheds where heavy sizing was practised without a day's illness occasioning loss of work. Five of them had known others who had suffered from damp or dust, though they had not themselves been affected. The remaining ten stated that they had suffered more or less from the damp, principally in the form of bronchitis, rheumatism, and neuralgia.' It seems plain that if we were to take at haphazard 27 adult people passing through any street in Manchester, we should find that a considerable percentage had been touched with these complaints, even though they had never at any time worked inside a cotton factory where heavy sizing is carried on.

The noble Marquis will probably make himself acquainted with this report, which largely affects his constituents, and will seek the opinions of some of the most intelligent employers upon the question. At the same time it is easy to see from the report that there is no probability whatever of such a case being made out as will lead to legislative interference. This would seem to become the more certain owing to the diminution year by year in the demand for heavily sized goods. Low Mexicans, which as a rule contain the greatest weight of size of any cotton cloths, have been for a long time practically out of demand, better grades commanding the attention owing to the cheap rates at which cotton goods are now to be purchased. The same remark applies to the trade in low qualities of shirtings for India. As regards 'heavy sizing,' then, there is a very large decrease in the number of looms engaged upon goods so treated. On examination of 19 medical gentlemen residing in the district, 13 affirmed injury more or less. five denied any evil effects whatever, and one was neutral. It is evident from this testimony that the evil effects can not be very obvious, or it would have been impossible to get five or six out of twenty medical men to deny absolutely their existence. The great difficulty with which we are likely to have to contend in this district will be to find work for our factory people, and, whilst it is very necessary that the work should be performed under the most favourable sanitary conditions, it would be foolish to attempt to interfere with the classes of goods manufactured, even though they may be of very low quality and require to be considerably adulterated in order to meet the demand for such cheap fabrics. We have before shown that there is no question of fraud in this matter of heavy sizing as between buyer and seller. We recommend the report of the Commissioners to the notice of manufacturers for some suggestions it contains, and as they are meeting in the various towns to consider the wages question, such opportunity might be a favourable one for considering this question also.

Printed Tapestries.

In the Exhibition of Decorative Tissues recently opened in the Fine Art Galleries of the Rue de Seze, in Paris, are some capital specimens of printed reps, velvets, and such like fabrics, in imitation of tapestry. Rep is used principally to give the effect of tapestry, which its grain imitates sufficiently well, and the subjects chosen are mostly direct copies of the verdures and landscapes executed during the last century by the Gobelins and other tapestry manufactories. Unfortunately, says a contemporary, the desire to give them the faded appearance of *bona fide* old tapestry has led to the colours being too pale and washed out. Great accuracy of outline, moreover, has been difficult to accomplish, and although trees and distant scenery are very well managed, this is not the case where figures or animals are portrayed. The most effective square of tapestry shown is materially improved in appearance by the addition of various pieces of material, such as brocade, woollen damasks, velvet, and coloured silks, cut in the form of the different garments worn by the figures, even to the stockings. By a system of shading where the smooth tissues are concerned and hot pressing, in the case of the velvet, the effect of the rude Gothic composition is very fairly carried out. One or two pieces of furniture—the belts and scabbards of the men, and the thicker portions of the priest's vestments—are rendered by applications of Cordova leather, or what has the appearance of such. Some really very handsome hangings are produced by printing on silk velvet, and the contrast between the smooth portions on which the colour is laid and the uncovered parts of the velvet is certainly happy, especially where arabesques of a Renaissance or rococo description only have been attempted. The copy of an allegorical scene *a la* Boucher is much less adapted to the work. In the case of a number of panels figured with reeds and water lillies, Panama grass, masses of peony flowers, and apple blossom, the tissue used for a groundwork is interwoven with gold thread, which has a pretty appearance and helps to keep up the illusion. These panels are the nearest approach to Beauvais tapestry in the collection, while others reproducing the charming quaintness of Japanese drawings and embroidery, compositions made up of birds and flowers, mandarine ducks and lotus blossoms, stalks and bamboos, the flowers of the azalea and bantam fowls, printed upon white and faintly-tinted Oriental silk, are very fair imitations of the productions of the Far East. The actual process appears to be a secret, although the public is to be invited to visit the manufactory at Suresnes; it may be presumed, however, that the printing is effected after the manner of chromo-lithography.

Proposed Introduction of Cotton Spinning into Macclesfield.

A scheme has been set on foot in the town of Macclesfield for the introduction of cotton spinning into the district. At a meeting recently held a number of speakers, amongst whom were some delegates from different parts of Lancashire, spoke of the great success of spinning in the districts surrounding Manchester, and predicted that, if the industry was started in Macclesfield, especially considering the advantages the town possesses as a commercial centre, and the fact that, whereas, when many of the Oldham mills were built they cost 30s. a spindle, and a mill could now be built at 20s., it must be a great success. Mr. Barnett (secretary of the Macclesfield Co-operative Society), said the scheme was to erect a new mill at a cost of say £70,000; and immediately that was subscribed to create a loan account, in which the society (whose profits were £6,000 annually) would be glad to assist by lending money as their position enabled them. For the present the society only purposed taking £1,000 in shares. They would act on the plan adopted in Oldham, where not more than half of the subscribed capital had ever had to be called up. From inquiries he had made he believed the mill could be erected and fitted up with the most modern machinery and appliances for 20s. a spindle. The Chairman of the Chamber of Commerce said that, in view of the depression in the silk trade, and of the unemployed labour in the town, it was desirable something should be done, and if they did not succeed in this scheme they must try another. He proposed, "That the meeting recommends the formation of the Macclesfield Cotton Spinning Company and pledges itself to do all in its power to raise the necessary capital." He said the town was willing to help itself, but thought they ought to look for some assistance from their Lancashire friends, considering that years ago the silk trade of the country had been sacrificed to the cotton trade. The resolution was carried unanimously.

International Exhibition at the Crystal Palace.

Great progress has been made in the arrangements for this exhibition, which promises to be of great importance. Official agents have been appointed in Austria, Belgium, Brazil, China, France, Germany, Greece, Holland, Hungary, Ireland, Italy, Japan, Norway, Persia, Russia, Sweden, Switzerland, Spain and the United States, and a large number of exhibits have been promised from all these countries. The industries of Great Britain will be well represented, and a large quantity of space has been taken for Ireland, it being the intention of the Irish manufacturers to exhibit separately, with the view of showing to the world at large, that their resources and powers of production, are as yet unknown to a great number of people. It is also in contemplation to add to the already large area of the Crystal Palace, by the erection of temporary buildings. The Government has officially informed all nations with which Great Britain has diplomatic or consular relations, of the forthcoming exhibition.

ORIGINAL DESIGNS.

Our first plate is a design of a very pleasing character, intended for a Printed Blind, the colouring for which should be: ground, cream-white; the stems and leaves, pale olive green, with shading in bright colours. This pattern is designed by Mr. J. L. Horner, 57, Dodworth Road, Barnsley.

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The second plate shows a design for a Tapestry Fabric, which, if well coloured, should be adaptable for either Hangings or Furniture Coverings. Mr. R. T. Lord, Gerrard Street, Halifax, is the designer.

* * * *

On our third plate, we give a design for Broché Satin or Velvet, which has also been designed by Mr. R. T. Lord. Patterns of this class should be very useful to a large section of our subscribers, as they are easily adapted to a variety of purposes.

Prize Competition.

The attention of our readers is called to the third prize competition, which is to be held early next month. The prizes in the first and second competitions were given for the best selections of designs for cloths suitable for ladies' and gentlemen's wear. At the request of many of our subscribers, we have decided to go a step further, and this time the first section of the competition will be confined to designs for carpets, tapestry curtains, or any kind of tapestry fabrics, lace curtains, linen table covers, damasks, broché satins or velvets, embossed plushes, quilts of any class, etc., etc. In judging the designs, not only will the general excellence of each be considered, but also their originality and fitness for the class of fabric for which they are intended. The designs are to be neatly executed in pencil or ink and are to measure either 7½ in. by 10½ in., or 10½ in. by 16 in. As these competitions are organized for the benefit of our subscribers, it is necessary that each competitor should be a subscriber, and none other will be allowed to compete. For the first prize, we offer a handsome silver medal, and for the second prize, a bronze medal. For the next six designs in order of merit we shall present one of our Design Books, containing 30 original designs for various classes of fabrics. Successful competitors must observe that their designs become our property, and further the winners of the first and second prizes will be required to re-draw their designs according to instructions, in ink, and upon paper which we shall supply for the purpose.

* * * *

In another section of this competition, the following prizes will be given. For the best six designs for worsted, woollen, or mixed goods for ladies' or gentlemen's wear:—First prize, a silver medal; the second prize, a bronze medal; and to the next four in order of merit we shall present one of our Design Books, containing 30 original designs for various fabrics, from which designers will be able to get valuable hints. In the former competitions, the prizes were awarded in money, but as some of the competitors suggest the value being given in medals, we accept their suggestion.

Full conditions and particulars may be had on application to H. and R. T. Lord, Halifax. The subscription to the Journal is 7s. per year, or 3s. 6d. per half-year, in advance (post free).

MONTHLY TRADE REPORTS.

Wool—The London sales commenced with brisk demand, although a large proportion of wool offered was not an average quality. The home trade has taken the lead in buying. Prices have ranged rather higher than at the last sales. At the Liverpool sales, fair business has been done, at about an average range of prices. In the Yorkshire districts, a sound tone has characterised the markets, although wools have only been bought by consumers to cover their actual requirements. Prices have ruled firm for medium qualities, and have exhibited a tendency to rise in the better sorts, in sympathy with the London sales. In the Scotch districts, prices have ruled firm in nearly all classes of wool, with a fair demand for the finer qualities. In the yarn and piece branches, business has been more satisfactory than for some time past, and the outlook is much more cheerful.

Cotton—The markets for the raw material have been of a changeable character, and there have been continual fluctuations in prices. In the yarn and goods branches, trade has been in anything but a satisfactory condition, as regards the volume of fabrics moving off manufacturers' hands. The South American markets seem to be the only ones taking an average quantity of goods, although the demand for the Eastern markets has sensibly improved during the month, taking into account the sales of yarns and cloth together. Prices have ruled tolerably steady.

Woollen.—There has not been much change to note in this branch, during the month, a rather quieter feeling has prevailed in the lower classes of goods, and stocks are consequently accumulating. In the Scotch districts, business has been rather quiet in most branches. In the Leeds district, trade has also been of a quieter nature, although a fair number of orders were issued early in the month. The coating trade, especially in fine makes, keeps fairly good, and prices have rather a hardening tendency. In Huddersfield, very little improvement has been experienced in any branch, and the outlook for the future seems anything but promising.

Linen.—The demand for linen has been about equal to the production of yarns and cloth. Anything in good design meets with a ready sale, but prices on the whole are barely remunerative to manufacturers. In jute fabrics, a good demand has continued, with prices firm. This branch of the trade has now been satisfactory for some months, and the prospect is still hopeful.

Lace.—The depression which has marked the lace trade for some time past has continued during the month, with some slight exceptions. The curtain branch has, perhaps, met with improved inquiry, but the prices offered have been so low that they would hardly be remunerative. Millinery laces, as a rule, have been neglected, and little has been done in ordinary and fancy nets. More business has been transacted in Irish trimmings and Swiss embroideries, while a new style called "Point de Vigne," has met with a fair demand. Prices on the whole are moderately firm, with some slight exceptions.

Carpets.—This branch of trade has been brisk during the month, and the outlook is very promising. It is very satisfactory to manufacturers, who, up to June, have had rather hard times for three or four years. Nearly all manufacturers are getting goods ready for spring delivery; these include nearly all classes. The rug and Brussels branches have been particularly active, and the designs produced have been far above the average in point of excellence. Prices keep very firm, and have a decided tendency to rise.

A Decorative Art Exhibition will be held in Dublin the first week in February, by the Royal Irish School of Art Needlework. The object of this exhibition is to encourage amateurs of the United Kingdom to produce well-executed decorative work, viz.:—art needlework, ecclesiastical embroidery, lace, wood carving, china painting, or designs for the same. A loan collection will be formed in connection with the exhibition.

DESIGNED BY R. T. LORD

BROCHE SATIN.

12TH DECEMBER, 1883. DESIGNED BY J. L. HORNER.

PRINTED BLIND.

12TH DECEMBER, 1883

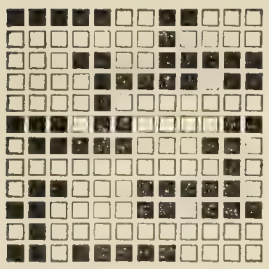
DESIGNED BY R. T. LORD

TAPESTRY.

ORIGINAL DESIGNS.

Fine Worsted Coatings.

No. 120



Design.

Warp : Twist worsted, 14,000 yards.

Weft : Single worsted, 30,000 yards.
2 threads to be used as one.

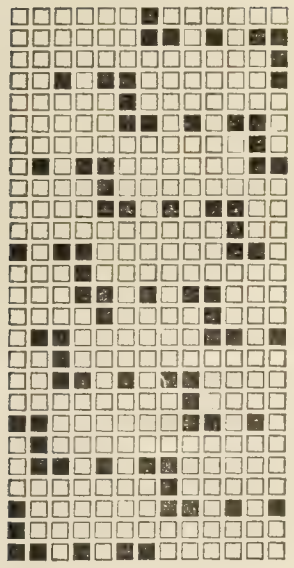
Woollen backing, 3,600 yards.

Picked : 2 worsted.
1 backing.

3

90 ends per inch.
86 to 90 picks per inch.
15's reed.
6 threads in a split.
66 inches wide in loom.
56 inches when finished.

No. 121



Design.

Warp : Twisted worsted, 20,000 yards.

Weft : Single worsted, 20,000 yards.

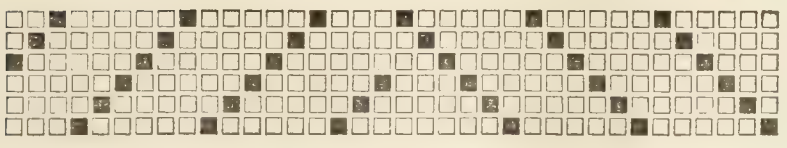
Woollen backing, 6,000 yards. 2 threads to be used as one.

Picked : 1 worsted.
1 backing.

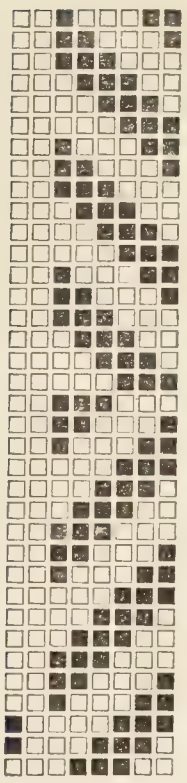
114 threads per inch.
80 to 84 picks per inch.
19's reed.
6 threads in a split.
66 inches wide in loom.
56 inches when finished.

Fancy Woollen Suiting.

No. 122



Draft.



Pegging Plan.

Warp :

1 Tinsel twist to Black, 12 skeins.
5 Black self twist ,,
3 Black and Green ,,
6 Black self twist ,,
3 Black and Green ,,

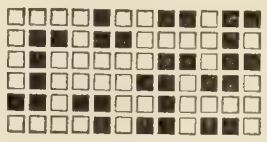
18

Weft the same as warp.

30 ends per inch.
30 picks per inch.
10's reed.
3 threads in a split.
70 inches wide in loom
56 inches when finished.

Worsted Trousering.

No. 123



Design.

Warp :

1 Black worsted twist,	15,000	yds. per lb.
1 Dark woollen	5,400	,, ,,
1 White worsted twist,	15.000	,, ,,
1 White silk,	75,000	,, ,,
1 Light woollen,	5,400	,, ,,
1 White worsted twist,	15,000	,, ,,
1 Black worsted,	15,000	,, ,,
1 Black woollen,	5,400	,, ,,
2 Black worsted,	15,000	,, ,,
1 Black woollen,	7,400	,, ,,
1 Black worsted,	15,000	,, ,,

12

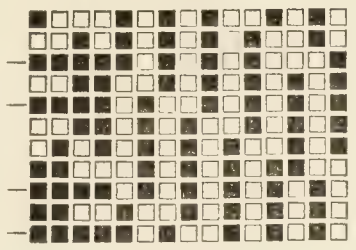
Weft : 2 Black worsted.
1 Black woollen.

3

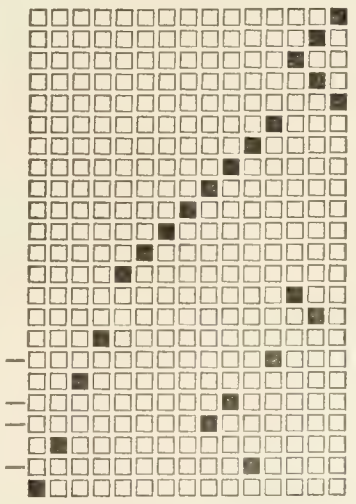
84 threads per inch.
84 to 90 picks per inch.
14's reed.
6 threads in a split.
66 inches wide in loom.
56 inches when finished.

Trousering.

No. 124



Design.



Pegging Plan.

Warp : 16 Black, 2/36's.
1 Dark Green, ,,
1 Black, ,,
2 Dark Green, ,,
1 Black, ,,
1 Dark Green, ,,
1 Black, ,,

23

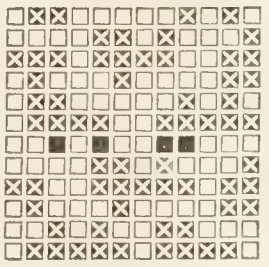
Weft : 1 Brown, 2/36's.
1 Black.
1 Brown.
3 Black.
1 Brown.
1 Black
1 Brown.
2 Black.

Green and Brown to be put where marked —

77 threads per inch.
74 picks per inch.
18's reed Scotch count.
8 threads in a split.
66 inches wide in loom.
56 inches when finished.

Cotton Backed Trousering.

No. 125



Design.

Weft : 2 Black.
1 Black cotton

Warp : 1 Brown Drab.
1 Pale Lavender.
1 Black cotton.
2 Pale Lavender.
1 Black Cotton.
1 Orange.
1 Pale Lavender.
1 Black cotton.
1 Pale Lavender.
1 Brown Drab.
1 Black cotton.

12

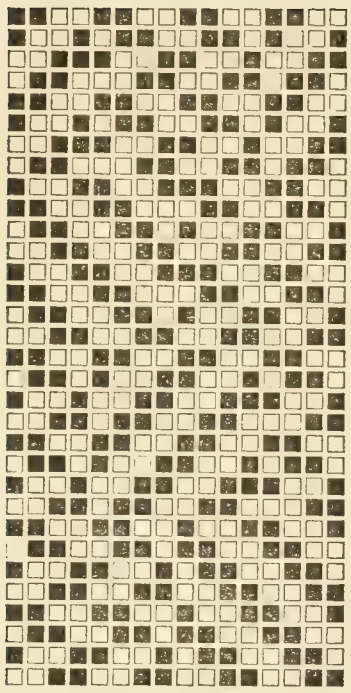
Warp and weft yarns: Brown Drab, Pale Lavender, Orange, Black } 30 Cuts
Black cotton, 2/14's

Orange in ■

16's reed Scotch count.
9's reed Yorkshire count.
52 threads per inch in warp.
54 picks per inch.
6 threads in a dent.
70 inches wide in loom.
56 inches when finished.
Clear finish.

Saxony Suiting.

No. 126



Design.

Warp:
Dark Brown, 350 yards per oz.

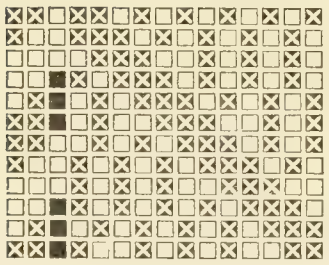
Weft:
Light Yellow Drab, 350 yds. per oz.

44 threads per inch.
44 picks per inch.
20's reed Scotch count.
4 threads in a split.
70 inches wide in loom.
56 inches when finished.

Draft straight over.

Worsted Trousering.

No. 127



Design.

Warp: 1 Black.
1 Light Drab.
1 Black.
1 Light Drab.
1 Black.
1 Light Drab.
1 Light Grey.
1 Black.
1 Light Grey.
1 Black.
1 Light Grey.
1 Black.
1 Light Drab.
1 Black.
1 Light Drab.
1 Black.
1 Crimson and Yellow twist.
2 Light Grey.

30

Weft, all Black.
1 Black
1 Light Blue.
2 Light Drab.
1 Black.
1 Light Grey.
1 Black.
1 Light Grey.
1 Black.
1 Light Grey.
1 Light Drab.
1 Black.
1 Light Drab.
1 Black.

Warp yarns: 2/36's twist.
1/120's Crimson twist.
1/120's Yellow twist.

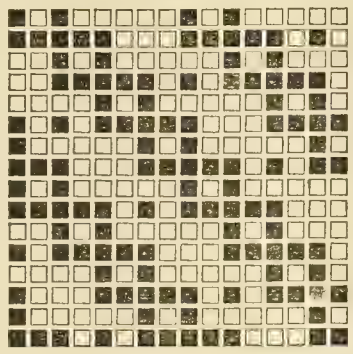
Weft yarns: All 1/18's Black

Fancy colour in ■

18's reed Scotch count
10's reed Yorkshire count
62 threads per inch in warp.
6 threads in a dent.
66 picks per inch.
66 inches wide in loom.
56 inches when finished.
Clear finish.

Coating or Suiting.

No. 128.



Design.

Warp:
1 end Bronze Green, 19 skeins, or Dark Olive.
3 ,, Light Olive, ,, ,,
1 ,, Bronze Green, ,, ,,
1 ,, Black, ,, ,,
1 ,, Bronze Green, ,, ,,
1 ,, Black, ,, ,,
1 ,, Dark Olive, ,, ,,
1 ,, Black, ,, ,,
1 ,, Dark Olive, ,, ,,
1 ,, Black, ,, ,,
1 ,, Bronze Green ,, ,,
1 ,, Black, ,, ,,
1 ,, Bronze Green, ,, ,,
1 ,, Black, ,, ,,

16

Weft: 1 pick Blue and Crimson twist, 38 skeins.
7 Black, single, 19 ,,

8

4,200 ends in the warp.
60 threads per inch.
60 picks per inch.
15's reed.
4 threads in a split.
70 inches wide in loom.
56 inches wide when finished.

Commercial Failures.

According to *Kemp's Mercantile Gazette*, the number of Failures in England and Wales, gazetted during the four weeks ending Saturday, November 24th, was 707. The number in the corresponding four weeks of last year was 846, showing a decrease of 139, being a net decrease, in 1883, to date, of 593.

The failures were distributed amongst the following trades; and for comparison, we give the number in each, in the corresponding weeks in 1881 and 1882:—

	1883	1882	1881
Building Trades	70	117	98
Chemists and Druggists	13	4	8
Coal and Mining Trades	10	13	26
Corn and Cattle	17	6	18
Drapery Trades	60	66	64
Earthenware Trades	6	8	2
Farmers	34	44	90
Furniture and Upholstery Trades	13	14	20
Grocery and Provision Trades	145	162	165
Hardware and Metal Trades	20	25	23
Iron and Steel Trades	26	29	27
Jewellery and Fancy Trades	28	27	26
Leather and Coach Trades	31	53	51
Merchants, Brokers, and Agents	66	101	94
Printing and Stationery Trades	10	20	26
Wine, Spirit, and Beer Trades	75	88	91
Miscellaneous	83	69	119
Totals for England and Wales—	707	846	948
Scotland	80	71	59
Ireland	15	17	15
Totals for United Kingdom—	802	934	1022

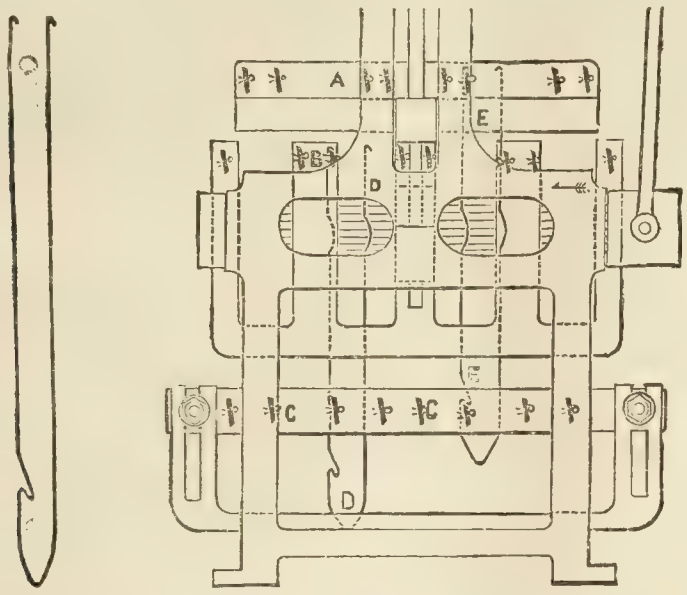
The number of Bills of Sale published in England and Wales for the four weeks ending Saturday, November 24th, was 977. The number in the corresponding four weeks of last year was 2,098, showing a decrease of 1,121, being a net decrease, in 1883, to date, of 30,005.

The number published in Ireland for the same four weeks was 63. The number in the corresponding four weeks of last year was 96, showing a decrease of 33, being a net increase in 1883, to date, of 22.

MACHINERY, TOOLS, &c.

Messrs. Priestley & Co.'s Patent Jacquard Machine.

In the last number of *The Journal* a description of Messrs. Priestley and Co.'s jacquard machine was given, since which, many of our readers, who are interested in the use of jacquards, have asked for particulars of the working of the uprights, &c. From the illustration, an idea of the mechanism may be gleamed. The letters, A, B, and C, represent grate bars; the letter D, shows a wire down; and E, shows a wire up. We also give a separate drawing of a wire.



In the working, when the uprights are risen, the hooks at the bottom part rest on a stationary grate, C, and when the top grate is risen, the hooks on the uprights will rise slightly from this stationary grate; thus, when the card is acting on the needles, it will press the low part of uprights off the grate, and those at the bottom will be pressed by the card the same as in an ordinary jacquard. The cards move the bottom or top part according to their position. The cards for use in the machine are those ordinarily used in jacquards, providing they are the same in pitch. All particulars of the jacquard can be had on applying to Messrs. Priestley and Co., Copley Street, Little Horton Lane, Bradford.

A New Machine for the Treating of the Rhea Fibre.

In our last issue some particulars relating to the Rhea fibre were given from *The Times*, in which it was pointed out how, for many years past, endeavours have been made in various directions to utilise this plant for the production of textile fabrics, but without general success, owing to the difficulties attending its profitable decortication. Four times within the present century has rhea been the subject of official action, while within the last 14 years a prize of £5,000 has been twice offered by the Indian Government, twice competed for, and twice withdrawn in consequence of all the mechanical means submitted for trial ha ving failed to meet the requirements of the Government. Within the past two or three weeks, however, it has been demonstrated that there is a machine of recent invention which effectually separates the fibre from the woody stem of the green rhea, and at the same time cleanses it from all extraneous adherent matter, producing it in good condition for the market, and this without any previous or subsequent treatment. This machine, which is the invention of Mr. H. C. Smith, consists of an iron framing about 3ft. high, 2ft. wide, and 3ft. deep, from front to back, carrying a revolving drum about 18in. in diameter and 12in. wide. The drum is fitted with a series of beaters which pass near the edge of a small feeding table about 12in. wide, the drum being covered in with an iron hood. From beneath the feeding table a thin sheet of water is made to play in a constant stream against the drum at a certain pressure angle, and this constitutes the whole of the apparatus. The fibrous plants are fed in by hand on the feeding table, and are simply held up to the beaters by a cushion or backing of water, by which means the whole of the extraneous matter is removed, and the fibre produced in a remarkably short time and in excellent condition.

The machine was invented about a year ago, and some specimens have been made and sent out to India, where they are now doing good work upon various kinds of fibrous plants. It does not, however, appear to have hitherto occured to anyone to try the effect of the machine in preparing the fibre of the rhea plant. This was probably on account of the woody nature of the rhea stalk, which, it might be assumed, would cause damage to the fibre if the stalk were beaten in a machine running at a high velocity. Little more than a fortnight since, however, the machine was brought under the notice of Dr. Forbes Watson, who, from his long practical acquaintance with fibrous plants, at once conceived the idea that with the water backing it would successfully treat the rhea. He therefore at once put the machine to the test, and found that his surmises were correct, and that rhea fibre could be effectually produced in a simple and speedy manner. A private demonstration of the process took place on the 6th of last month, at Messrs. George Jenning's Works, Stangate Wharf, Lambeth, upon which occasion there were present General Hyde, of the India Office, the Hon. Henry Berkeley, Mr. C. E. Collyer, and the representatives of some of the leading firms in the fibre trade. The experiments were conducted by Dr. Forbes Watson, and consisted primarily in the treatment of some rhea grown in England as well as other stalks of rhea grown in France. It should be observed that in practice the rhea would be treated freshly cut and in its green and juicy condition. In the present instance, however, the English stalks were cut on the 30th of October, and although they had been, as far as possible, preserved green, they were not of course in a condition to justify the expectation of the best results. Nevertheless they were all successfully treated, the fibre coming out much better than had been anticipated. In one of the tests, 115 stems of the French Rhea were treated by the operator and the fibre produced clean and free from all adherent particles in three and three-quarter minutes. Besides the foregoing several varieties of fibrous plants were put through the machine, including the *Fourcroya gigantea*, an Indian aloe, the *Sanseveira Zeylandica*, or bowstring hemp, as it is called by the natives, the yucca, and the *phormium tenax*, or New Zealand flax. All these were successfully treated, and considering that none of them were freshly cut, and that, moreover, they were garden specimens of various species, the fibre left the machine in a clean and satisfactory condition. It was amply demonstrated that the main object of the experiments, the treatment of the rhea plant, had been fully and fairly accomplished. There were shown some samples of fibre of the *Fourcroya gigantea* [and *Moorva* or *Sanseveria Zeylandica*] which had been prepared by the machine in India and sent over in bales by Messrs. Staines and Co., of Coimbatore, Madras, and with which the fibre produced from the same species of plant on the 16th ult. compared favourably, considering the unfavourable circumstances, already referred to, under which the trial was made. On the whole, then, it may be reasonably assumed that the problem of the mechanical preparation of rhea fibre has been solved, and that the prospects of the utilization of this valuable, but hitherto useless, plant are now fairly established. The invention is in the hands of Mr. C. E. Collyer, of 141, Fenchurch-street, London.

Improved Jacquard Apparatus for Lace.

An invention, relating principally to improvements in the construction of what are termed the "cylinders" of jacquard apparatus as used in lace machines, was, a short time ago, patented by a Nottingham machinist. Until recently the "cylinders" in question have been made principally of brass, the plates of which have been drilled with a series of holes extending their whole length in rows. This labour has been, as a rule, very costly, and the process, at times, inconvenient. By this patent it is guaranteed that the cylinders can be produced in a more economical, convenient, and generally more satisfactory manner. To our readers, who understand the mechanism of lace jacquard apparatus, the following description may prove of interest. In carrying out the invention there is placed, near each end of an axis or spindle a pair of square or other shaped plates, the inner plate of each pair bearing against a shoulder or collar upon the central spindle and the outer plates are upon tubular bosses capable of sliding along the spindle which passes through the centre of the plates. These plates have suitable grooves in their edges, and suitable metal wires or rods are placed in these grooves, the wires or rods being fixed either to the inner or outer plates. When necessary, additional guide or strengthening plates may be fixed on the axis or spindle at suitable distances apart. The distance between each of the grooves and the wires in them is equal to the diameter of the holes punched in the pattern cards used in the machine. The wires or rods are kept at a proper tension and perfectly true by means of screws passing through the outer plates at each end of the axis or spindle. It is obvious that the dropper sleys of the jacquard apparatus may be constructed on the same principle as above indicated.

French Exports.

A considerable expansion of French exports in the direction of Italy has occurred during the present year, both in the metallurgical and textile branches. Those of woollen blankets have more than doubled, while the exports of cotton fabrics, white and unbleached, have been progressing in an almost corresponding ratio, and that remark also applies to the same material sent to Algeria. Dyed fabrics find a more active outlet in England, but a contraction has taken place in Italian and Swiss centres. Cotton prints and plain muslins have been disposed of with far more difficulty in most of the foreign markets, and the returns under these heads are unsatisfactory. For embroidery, including curtains, there has been a steady demand, and the oilcloth trade has been gradually improving for several years past. Larger exports are shown under the heads of battiste and linen, laces and guipures, jute tissues, hemp and flax yarns, jute ditto, silk tulle, mixed silk goods, silk lace with gold or silver threads, and velvets. On the other hand a decline is to be noted in gauzes and crape in pure silk, woollen yarns, raw silk tissues, including neckerchiefs, silk hosiery, pure silk laces, ribbons, tapestry and merinos.

Trade with Mexico.

Mr. Carden, English Vice-Consul at Mexico, in a report to the Foreign Office, makes a number of observations that will be of interest to merchants engaged in trade with Mexico. In most cases only superior qualities of goods can, it appears, be imported into the country, as the bulk of the population is still too poor to buy any but low-class articles, and these are almost wholly of home manufacture, the customs duties levied being practically prohibitive. The tariff and customs law is so complex and vexatious in its regulations regarding foreign trade that the wonder is that there are any imports at all. There are over 880 categories of taxable articles, and even those included in the so-called "free" list are now subjected to duties of 50c. to $1 per kilogram. This surtax also applies to the articles subject to duty. The inhabitants of Mexico, are, he says, very good judges of quality in most classes of articles. They are also very slow to change the direction of their custom when once they are used to particular kinds of goods. Mr. Carden believes that as the education of the people and the development of the country progress the demand for foreign goods will greatly increase in Mexico, and he urges strongly on British merchants and manufacturers the necessity of strenuous exertion in order to meet the competition of American, German, and Belgian articles.

New Printed Upholstery Fabrics.

Some admirable patterns of printed fabrics suitable for upholstery purposes for the seasons of 1884, are at present being put upon the market, and are being purchased by merchants and retail dealers in fairly large quantities. In style, as regards design and colouring, they excel anything that has yet been produced by manufacturers in this country. The variety of samples on view is very extensive, and are offered at such prices, that, taking into account their general excellence, they are bound to meet with a ready sale when offered to the public. In the lower grades of goods, there are some elaborate patterns suitable for the making of curtains, hangings, chair, and sofa coverings, &c. They are mostly made of heavy cotton cloth, which needs no lining in upholstering, have a very substantial look, and when used as curtain hangings, for which they are eminently fitted, they hang in rich and graceful folds. As material for seating chairs and sofas, they are well adapted, the thick cloth having something of the feel of rep and such like fabrics. In the thinner makes of cloths, there are some very appropriate designs; but for curtain and hanging purposes they are not so well adapted as the heavier cloths, there being a want of gracefulness in the folds which thin materials are incapable of assuming. On the whole, the patterns are masterpieces of printing, and reflect the highest credit upon the producers of them.

The Knit Goods Trade.

Some of the manufacturers on the other side the Atlantic, are rather downhearted at the quietness which has lately characterised the Jersey and some other branches of the knit-goods trade. We are inclined to think that the slackness in the demand will only be temporary, and that the trade will shortly revive again. One of our contemporaries says:—"The fact that what may be called a lull has occurred in the business of manufacturing Jerseys has inclined some persons to believe that the demand for knitted fabrics for outside garments is likely to be only of a temporary character. It will, however, be found, upon examination, that the demand for Jersey cloths is still very large, and that the diminution of that demand is by no means so considerable as many people seem to imagine. The truth is, that the strong demand has had the usual effect of creating an enormous supply, and while no one can doubt that the business has been injured by the presence in the market of very inferior fabrics and poorly-made garments, tens of thousands of women are still wearing Jerseys. Every fashion article, in the journals devoted to such matters, indicates the continued popularity of the fabric, and any one who visits the dry goods stores may see for himself that the sales of these goods are large and constant. However, it may be admitted that the Jersey garment in its present shapes will probably, before very long, become unfashionable. The time will come when women who dress well will not wear it, and then the day will not be far distant when women who are compelled to dress poorly will no longer desire it. But there is no good reason for believing that knitted fabrics, offered as substitutes for cloth, will so readily be thrown aside. Utility in clothing is a quality of quite as much importance as beauty, and knitted cloths are unquestionably useful, as at times they are beautiful. A well-made knitted fabric is as susceptible of high finish as any other kind of cloth, and it is superior to most kinds in durability. Its extreme elasticity is a quality which enables it to withstand such rough usage as few woven fabrics could endure without injury. A Jersey suit, made of good material, for a boy will outwear anything but leather. It will take less dirt, be less liable to tear, and will preserve its shape better than cloth; and anxious mothers will find it hard to procure any fabric which will look so well on a boy from first to last. These same qualities recommend it strongly for men's wear, and we are glad to perceive that merchant tailors of the best class are offering high grade knitted fabrics to their customers for suits. The cloth can be made light and thin, but very strong, for summer wear, while for winter it may have weight and elegance of finish enough to satisfy the requirements of the most fastidious. The manufacturers of the heavy stockinet fabrics which are now being pushed into the market, are probably the men who have given the right direction to their efforts. These goods are finding deserved favour, not only for men's wear, but among ladies for cloakings and suitings. They combine all the essentials of an excellent fabric, and there is really no reason why they should not have a permanent place among standard goods, being sought for season after season."

Book Notices.

Messrs. S. and A. F. Spitzli, West Troy, New York, forward a copy of the fifth and enlarged edition of their "Manual for managers, designers, weavers and others connected with the manufacture of textile fabrics." The book contains, articles of special interest, and treats of wools, worsted, cotton, silk, &c., in a masterly manner. The definitions, derivatives and explanations of technical terms are most exhaustive, and the various tables which are given are of the most valuable description. This useful matter occupies about 250 pages, including an appendix; is printed on fine toned paper, and is handsomely bound in cloth. We congratulate Messrs. Spitzli on the production of a work which has met with such a warm reception—a proof of which is the fact that it is now running through its fifth edition. The work is published in two forms, viz.: at 8s.6d. per copy, and including the appendix at 21s. per copy, and may be ordered of H. and R. T. Lord, *Journal of Fabrics and Textile Industries*' Office, Halifax.

We have received a trade catalogue of the looms and machinery manufactured by the firm of Mr. Henry Livesey, Limited, Blackburn. In the opening pages will be found a most interesting account of the rise and progress of the firm, from the time of its foundation in 1863 down to the present date. Some idea of the magnitude to which it has attained may be gathered, when it is stated that a shed for four hundred looms can be completely equiped with winding, warping, and sizing machinery, looms, and every mechanical requisite needed in textile manufacturing, in a month from the commencement. The firm consumes about 3000 tons of iron per annum, and their production of looms is about 100 per week, with winding, warping and sizing machinery, and from 40 to 60 dobbies. The catalogue contains illustrations and full descriptions of different kinds of machinery, consisting of many varieties of looms, such as twill, drop box, circular, dobby, linen, silk, fustian, and also Woodcroft's looms; the Blackburn and Keighley dobbies; cop winding, throstle, coloured winding and pirn winding machines; warping, size mixing and slasher sizing machines; drawing-in and looming frames, plaiting machines and hydraulic presses. There are also illustrations and full descriptions of the sundry fittings for the whole of the machinery made by the firm, together with shuttles, temples, pickers and every variety of furnishings required in a manufactory. The catalogue contains over 80 pages, and is got up in a neat and effective manner.

We are informed from Milan that the critical state in which the raw silk trade has now been for some years past, has found a practical outcome in a proposal to establish a silk-trade banking establishment, which shall not only advance money on silk, but also purchase it. The obvious danger of such an arrangement is that the institution might create an absolute monopoly of the market, which in the history of trade is not a quite novel, but at least a very rare, feature.

Calcutta International Exhibition.

The opening ceremony of the Calcutta Exhibition took place on the 4th inst., under the presidency of the Governor-General, in the presence of H.R.H. the Duke of Connaught, Sir James Fergusson, Governor of Bombay, and a large number of the principal chieftains of the Indian States, and British and native officials. It is not anticipated that the whole of the interior arrangements will be completed for some weeks. The classification adopted is the following :—Section A.—Fine Arts ; Section B.—Education and Application of Liberal Arts ; Section C.—Health ; Section D.—Furniture and other Objects for the use or Decoration of Dwelling-houses and other Buildings ; Section E.—Fabrics, including Apparel, Toilet Requisites, and other Objects of Personal Wear or Use ; Section F.—Raw Products and Manufactures from Products, not included in other Sections ; Section G.—Machinery and Implements, Means of Transport, Appliances and Processes used in the common Arts and Industries, including Models and Designs ; Section H.—Food Products ; Section I.—Agriculture and Horticulture ; Section K.—Ethnology, Archæology and Natural History.

ODDS AND ENDS.

Velvet or velveteen is the leading material for costumes this winter, and certainly no other texture combines so satisfactorily with the many woollen fabrics which are so universally worn.

* * * *

A telegram from New York states that Secretary Folger's annual report recommends a further reduction of the tariffs on sugar, iron, steel, woollens and cottons, and raw material. He advises a conversion of the Four per Cents. into Three per Cents.

* * * *

The Huddersfield and the Oldham Exhibitions have been such decided successes that they are both to remain open to the end of this month. The attendance at each place has exceeded 320,00. In a financial sense the exhibitions have been very successful.

* * * *

There is something novel and original about the following advertisement which we copy from a newspaper of recent date.

"Wanted six good Hearthrug Weavers. Those who make it a habit of being sick or idle every Monday, after a day's rest, need not apply."

* * * *

Plush is still a good deal used, but is not seen so often as figured velvet, broche velvet, or satin brocade. In all these rich materials there is an immense variety, in fact it is almost bewildering to choose among so many beautiful designs and textures. The favourite styles for these raised fabrics are arabasques, geometrical patterns, and a rich design of fruit and leaves.

* * * *

The Galashiels Weaving School was opened a few days ago, with 81 students. Mr. Welsh, the master, explained what the course of instruction would include, and laid down some practical rules, which he recommended the students to adopt. He then lectured on "The Gristing of Woollen Yarns," stating various methods of calculation adopted in different manufacturing centres.

* * * *

Fashionable colours are claret, crimson, and plum colour, in all and every material. The new grey is a pretty and more becoming shade than the somewhat hard tone of colour worn during the past spring and summer months, the admixture of blue in its composition imparting softness. Smoke-grey, smoke-blue, and smoke-green are all fashionable shades—the colours, pure and bright in themselves, appear to have passed through smoke.

* * * *

A notice in the *Rangoon Times*, states that Mr. H. L. Tilley has strenuously exerted himself to secure a collection of the various descriptions of silk found in the province of Burma, for the Calcutta Exhibition. The Burma mulberry silk has already attracted attention, and European experts have pronounced it to be fully equal in quality to the best Chinese "chops," so that the prospects of silk growers in the province are bright, and there is every likelihood of an impetus being given to this hitherto neglected industry.

* * * *

As a specimen of the variety of exhibits being daily offered at the Calcutta Exhibition, the *Englishman* gives the following letter received from Rájsháhai :—"Sir, I have the honour to inform you that I have a man from whose forehead has sprung a regular horn. I intend taking down this man to the Exhibition ; please let me know what remuneration can I expect from you, if I hand the man over to you."—Mr. Joubert has decided that this gentleman comes under the head of "horned cattle," so cannot be exhibited ; the exhibition being intended for the display of works of art and manufactures, specimens of *lusus naturæ* cannot be received.

THE GAZETTE.

Liquidations by Arrangement or Composition.

Ranger, M , 8A, Rumford Place, Liverpool, Lancashire, cotton merchant.
Horobin, E., Sawley Road, Long Eaton, Derbyshire, lace manufacturer.
Stone, G., New Building lane, Frome, Somersetshire, cloth manufacturer.
Smyrniudi, S., Buynk, Teni-Khan, Constantinople, merchant in woollen and manufactured goods.
Wightman, J., King Edmund Street, Dudley, Worcestershire, agent.
Brumalley J. and J. Emery, Pendleton, Lancashire, cotton manufacturers.
Ward, H., Huddersfield, woollen and worsted manufacturer.
Dalton, H., Halifax, cotton spinner.

Dividends.

Gould, F. H., Windmill Street, Milton-next-Gravesend, Kent, designer to calico printers ; a first dividend of 2s. 8¼d. in the pound, on account of 20s. to new proofs only, at the Official Assignee's office, in the London Bankruptcy Court, 34, Lincoln's Inn Fields.
Hammond, T., Hollin Lane Dye Works, Sutton, near Macclesfield, Cheshire, silk dyer ; a first and final dividend of 3s. 10d. in the pound, at the offices of Mr. G. Ibeson, trustee, 76, Derby Street, Macclesfield.

Bills of Sale.

	£	s.	d.
Buckley, J. B., King Street, Oldham, cotton dealer	42	0	0
Dowson, J. R., 38, Cleveland Street, Doncaster, tailor	42	0	0 &c.
Grant, W., Oakley Street, Shrewsbury, woollen draper, &c.	235	4	
Greenwood, J., Copping Hall, Mirfield, cotton doubler			
Greenwood. I. S., Bracken Hill, Mirfield, cotton doubler	200	0	0
Wheater, J., Chapel Lane, Armley, woollen spinner	75	0	0
Bickerton, C E., Southampton Street, Strand, shirt collar maker	110	0	0
Shaw, S., Lower Fold, Marple Bridge, near Stockport, lace cutter	40	6	0
Haworth, J., 38, Adamson Street, Padiham, tapesizer, &c.	91	0	0
Joyes, A., Gaol Square, Stafford, draper	150	0	oab.s.
Wild, J. C., 72, Wallshaw Street, Oldham, cotton waste dealer	30	0	0 &c.
Harris, T. J., Suffolk Road, Stamford Hill, manager, trimming warehouse	30	0	0
Harrison, W., and Wilkinson, J., Kirkgate, Settle, tailors, &c.	140	0	0 &c.

Dissolutions of Partnership.

Chorley, G., and Mackenzie, T., 29, West Mosley Street, Manchester, cotton manufacturers.
Greenwood, J., and Broughton, H., Trawden, Lancashire, shirting manufacturers.
Ashworth, E., Lever, D., and France, E., Ashton Road, Denton, Lancashire, hat manufacturers.
Beddoe, J., and Hulbert, J., 126 and 127, Wood Street, Cheapside, London, warehousemen.
Lupton, P. J., and Jackson, A. J., 179, Aldersgate Street, London, frilling manufacturers.
Burns, T. W., and Speer, J., 39, Foster Lane, London, linen merchants, &c.
Cliffe, M. W., jun., and Hanson, J. W., Huddersfield, Yorkshire, woollen manufacturers and merchants.

PATENTS.

Applications for Letters Patent.

Bobbin holders for lace machines. J. Chapman, New Basford	8th Nov. 5295
Carpets. T. Tempest, Radford, Worcester	2nd Nov. 5213
Carding cotton. B. A. Dobson and W J. Bromiley, Bolton	3rd Nov. 5230
Colouring matters. W. R. Lake, London. A communication	24th Nov. 5515
Destroying vegetable matter in woollen and silk fabrics. E. and J. E. Tolson, Dewsbury	2nd Nov. 5223
Drying wool and other fibres. J. and W. McNaught, Rochdale	9th Nov. 5300
Drying machines for wool, &c. C. F. C. Morris, Southwark, T. H. Baker, Bow, and W. Francis, Bermondsey, London	15th Nov. 5398
Dyeing matters. J. H. Johnson, London. A communication	19th Nov. 5450
Elastic webbing. L. Turner, Leicester	9th Nov. 5309
Finishing fabrics. J. Chadwick, Littleborough	21st Nov. 5477
Fixing aniline colours. L. Heppenstall, junr., Huddersfield	17th July 3522
Lace. C. D. Abel, London. A communication	16th Aug. 3982
Lace. W. Birk, junr., Nottingham	1st Nov. 5190
Looms. I. H. Blamries, Huddersfield	23rd Nov. 5495
Looms. W. R. Lake, London. A communication	13th Nov. 5362

Looms. W. R. Lake, London. A communication 13th Nov. 5362
Looms. A. P. Dickinson and J. Conlong, Blackburn 24th Nov. 5514
Looms. R. Hall and C. Ellis, Bury 27th Nov. 5549
Ornamenting cloths. H. H. Cook and H. Hepworth, Leeds 2nd Nov. 5215
Producing designs on waterproof fabrics. C. Moseley, Manchester 2nd Nov. 5207
Process for unteaseling woollen fibres. W. A. Barlow, London. A communication 16th Nov. 5418
Pile fabrics. S. C. Lister and J. Reixach, Bradford 28th Nov. 5561
Reeling yarns, &c. L. Haslam and C. Marshall, Bolton 3rd Nov. 5229
Sewing machines. T. J. Denne, Selhurst 15th Nov. 5390
Spinning and doubling, &c., yarns. K. Tatham, Rochdale, and T. Bentley, Oldham 9th Nov. 5319
Spinning mules. T. Rawsthorne, Preston 7th Nov. 5277
Spinning machinery. J. M. Hetherington, Manchester 3rd Nov. 5228
Sewing machines. H. Beech, Denton 3rd Nov. 5231
Sizing yarns. A. Hitchon, Accrington 5th Nov. 5237
Self regulation machinery for lace and other fabrics. H. B. Payne, Nottingham 13th Nov. 5366
Sewing machines. J. Imray, London. A communication 15th Nov. 5394
Shuttle tongues. W. Carr, Bury 29th Nov. 5566
Tempering bobbins on spinning frames. H. S. Boase, Dundee 15th Nov. 5383
Wool-oiling machinery. J. L. Matthew, West Troy, N.Y. 13th Nov. 5358
Washing machines. J. Bryson, Bolton 20th Nov. 5456
Waterproofing fabrics. E. De Pass, Paris. A communication 5th Nov. 5242
Winding cotton and other yarns. H. C. Hill and H. H. Brown, Staleybridge 27th Nov. 5532

Grants of Provisional Protection for Six Months.

4287	4792	5200	4417	4814	4819	4828	4862
4900	4921	4922	4923	4935	4969	4971	4982
4992	5003	5013	5016	5026	5059	5119	5120
5131	5146	5160	5172	5190	5358	5362	5196
5207	5213	5215	5223	5228	5229	5230	5231
5237	5242						

Notices to Proceed.

Bleaching cotton, &c. G. H. Sharpley, Walmersley, near Bury 5th Oct. 4758
Cotton gins. H. J. Haddan, London. A communication 6th Sept. 4287
Combing machines. J. H. Whitehead, Leeds. A communication 12th July 3426
Carbonising rags. W. Brierley, Halifax. A communication 31st July 3744
Drawing rolls for spinning machinery. W. R. Lake, London. A communication 17th July 3520
Dyeing matters. R. Holliday, Huddersfield, and W. R. Hodgkinson, London 31st July 3720
Dyeing matters. T. Holliday, Huddersfield 16th Aug. 3971
Dyeing and staining fibres or fabrics. L. Glover, Silcoats, near Wakefield 25th Aug. 4122
Dyeing and cleaning yarns. W. R. Lake, London. A communication 1st Nov. 5200
Embroidery machines. W. E. Gedge, London. A communication 13th July 3456
Folding fabrics. H. J. Haddan, London. A communication 2nd July 3269
Fixing colours on fabrics. A. W. Kirk, Halifax 11th July 3422
Gearing and changing of healds. S. H. Storry and S. D. Rhodes, Huddersfield 25th July 3649
Looms. W. Houghton and E. Knowles, Gomersal, and H. Bradbury, Leeds 31st July 3743
Jacquard apparatus. R. Scott, Nottingham 29th Aug. 4164
Looms. A. W. L. Reddie, London. A communication 30th July 3722
Looms. J. S. Park, Stockport, and J. Park, Manchester 12th July 3442
Looms. R. L. Hattersley and J. Hill, Keighley 6th July 3348
Looms (smallware). T. Hirst, Manchester 6th July 3352
Lubricating spindles. J. Marshall, Ashton-under-Lyne 9th July 3389
Pickers. J. Holding, Lower Broughton 13th July 3448
Stretching machines for finishing fabrics. H. H. Lake, London. A communication. 13th Aug. 3920
Vessels employed for dyeing and scouring purposes. J. Woodcock, Huddersfield; and J. Coulter, Batley 3rd July 3284
Ornamenting fabrics. W. Clark, London. A communication 24th July 3630
Preparing and spinning yarns. W. Lancaster, Accrington 28th July 3694
Preparing flax, silk, wool, &c. J. W. Bradley, Bradford 26th July 3659
Packing frillings, fringes, &c. J. McCallum, Manchester 22nd Oct. 5016
Shuttles for looms. W. E. Gedge, London. A communication 4184
Spinning machinery. E. Edwards, London. A communication 23rd July 3617
Spinning and winding fibres. W. Tatham, Rochdale 17th Oct. 4935
Scouring and washing machines. J. Petrie and F. W. Petrie, Rochdale 21st July 5391
Twisting yarns and threads. W. Cunningham. Dundee 23rd Oct. 5026
Warp beams for looms. J. Wetter, Wimbledon. A communication 24th July 3640

Patents Sealed.

1863	2319	2364	2367	2379	2450	2457	2486
2490	2530	2564	2565	2597	2619	2632	2641
2668	2761	2823	2906	3130	3439	4072	4115
2970	4159						

Patents on which the Stamp Duty of £50 has been paid.

Jacquard wires. W. Martin and J. Hind, Nottingham 5th Nov., 1880 4543
Looms. F. O. Tucker, Huddersfield 9th Nov., 1880 4592
Cut-pile fabrics. R. Atherton, Bradford 9th Nov., 1880 4600
Bleaching apparatus. W. Birch, Salford 10th Nov., 1880 4610
Spinning machinery. J. M. Hetherington, Manchester 13th Nov., 1880 4673
Cards for carding engines. G. Etty Manchester 13th Nov., 1880 4682
Ribbing apparatus for knitting machines. W. H. Beck, London 15th Nov., 1880 4697
Circular knitting machines. S. Thacker, Nottingham 15th Nov., 1880 4706
Tentering machines. G. H. Nussey, and W. B. Leachman, Leeds 20th Nov., 1880 4815
Looms for carpets. W. Adam, Kidderminster 22nd Nov., 1880 4842
Colouring matters. O. N. Witt, Mülhausen 18th Nov., 1880 4846
Looms. J. Crook, Blackburn 23rd Nov., 1880 4856
Looms. J. Lyall, New York 25th Nov., 1880 4902
Machinery brushes for pile fabrics. J. Worrall and J. Lawrence, Salford, and J. Lee, Eccles 14th Dec., 1880 5241
Spinning machinery. J. C. Fell, Ashton-under-Lyne 11th Dec., 1880 5192
Looms. E. Crossley, Halifax 17th Nov., 1880 4737

Patents on which the Stamp Duty of £100 has been paid

Spinning machinery. R. Curtis and W. H. Rhodes, Manchester 6th Nov., 1880 4560
Looms. P. Young and J. Mathieson, Glasgow 6th Nov., 1880 4562
Carding engines. G. and E. Ashworth, Manchester 4th Nov., 1880 4507
Embroidering machines. A. Heaven, Manchester 4th Nov., 1880 4525

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(Registered during November, 1883.*)*

Class VI., Carpets.

406,618 Storey Brothers, Lancaster.
406,726 J. Williamson and Son, Lancaster.
406,952 Storey Brothers and Co., Lancaster.
407,158-60 J. Humphries and Sons, Kidderminster.
407,386 R. Helbronner, London.

Class XI., Furnitures.

406,226-28 D. Lee and Co., Manchester.
406,367 R. Dalglish, Falconer and Co., Manchester.
406,450 T. Hoyle and Sons, Limited, Manchester.
406,451 C. H. Traub and Co., Manchester.
406,481-82 The Rossendale Printing Co., Manchester.
406-510 S. and C. Nördlinger, Manchester.
406,553-54 D. Lee and Co., Manchester.
406,608-12 D. Lee and Co., Manchester.
406,619-20 D. Lee and Co., Manchester.
406,656 T. G. Hill and Co., Manchester.
406,657 R. Dalglish, Falconer and Co., Manchester.
406,777 D. Lee and Co., Manchester.
406,778 The Rossendale Printing Co., Manchester.
406,877 R. Dalglish, Falconer and Co., Manchester.
406,894 Rossendale Printing Co., Manchester.
407,055-57 D. Lee and Co, Manchester.
407,110 R. Daglish, Falconer and Co., Manchester.
407,264-65 Rossendale Printing Co., Manchester.
407,266 R. Daglish, Falconer and Co., Manchester.
407,339-47 W. Watson and Co., Manchester.
407,461 T. Hoyle and Sons, Limited, Manchester.
487,462-64 D. Lee and Co., Manchester.
407,644-51 W. Watson and Co, Manchester.
407,652 Melland and Coward, Manchester.
407,754-55 D. Lee and Co., Manchester.
407,756-58 Beith, Stevenson and Co., Manchester.

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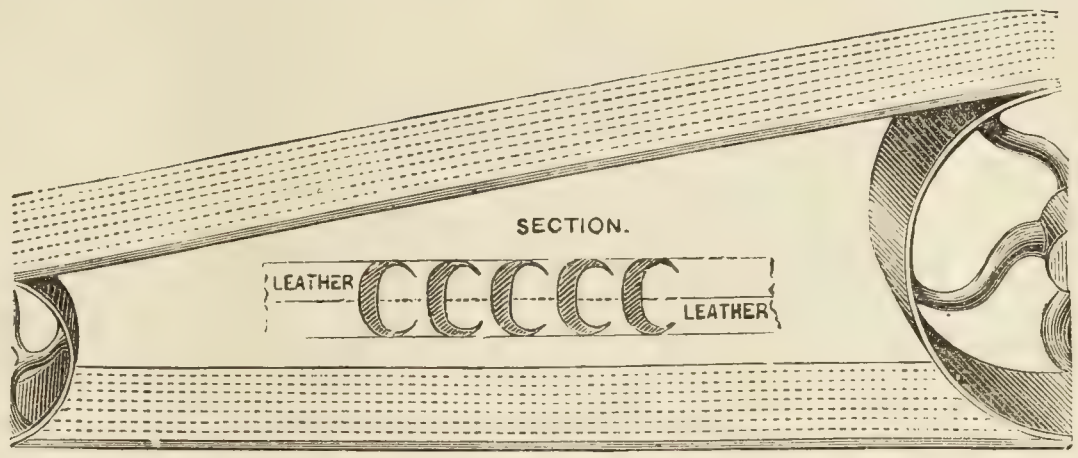
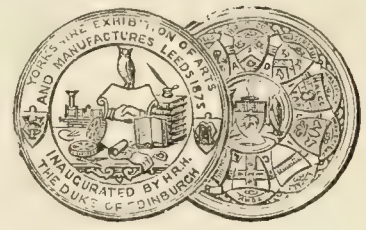
MAIN LEATHER DRIVING BELTS.

BRONZE MEDAL
AND HONOURABLE MENTION.

PARIS, 1878.



PRIZE MEDAL FOR BELTING,
CARD AND
CLOTHING LEATHER, &c., &c.



LEEDS, 1875.

THESE BELTS are made of the very best Oak-tanned English Leather, cut from the choicest parts, specially Prepared, Stretched and Manufactured with the greatest care and attention; united by Hydraulic Power, and Sewn with Copper Wire, by WHITE'S PATENT WIRE SEWING MACHINE, as shown by the section above, any width, and capable of transmitting any amount of power required. Whilst giving prominence to their Wire Sewn Belts, as being in their experience the best in construction, J. W. & SONS will sew with lace, wax thread, or in any other way that may be desired.

First Prize Medal awarded for general excellence in Belting, Card and Combing Leathers, at the Yorkshire Exhibition, Leeds, 1875.
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Machine Belting of all kinds.	Soft Spinning Roller Hides.	Green Picking Bands.	Flap Leathers for Cold Blast Engines.
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Hard Spinning Roller Butts.		Flat Horny Laces.	

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Stand No. 93, Gallery of Annexe, Huddersfield Technical School Exhibition,

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(HEBBLETHWAITE'S PATENT)

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It is a Combination Belt, having a leather surface, it has all the advantages of a Leather Strap in clinging to the Pulley. The outer surface being woven, it has the superior strength of a woven belt, and for the purpose JAMESON & CO.'S EUREKA BELT is used. It can be made any length or width, and is less affected by atmospheric changes than any other make. It is as pliable as single leather, and stronger than a treble leather belt, and does not stretch.

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